Extraflame®

Riscaldamento a Pellet

PELLET STOVES USER MANUAL

HP 15 - 22 -30

ENGLISH/INGLESE

We thank you for having chosen our company; our product is a great heating solution developed from the most advanced technology with top quality machining and modern design, aimed at making you enjoy the fantastic sensation that the heat of a flame gives, in complete safety.

ENGLISH 5

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SPECIFICATIONS

FEATURES		HP 15	HP 22	HP 30
Weight	kg	250	260	350
Height	mm	1304	1304	1408
Width	mm	560	560	780
Depth	mm	685	785	775
Exhaust tube diameter	mm	120	120	120
Air intake tube diameter	mm	50	50	60
Max global thermal power	kW	16.9	25	33.9
Rated output thermal power (made with water)	kW	15.2	22.5	31
Min global thermal power	kW	5	7.4	9.5
Min thermal power output	kW	4.4	6.6	8.6
Max hourly fuel consumption	kg/h	3.5	5.2	7
Min hourly fuel consumption	kg/h	1	1.5	2
Pellet tank capacity	kg	43	60	71
Recommended chimney draught	mbar	0.03-0.1	0.03-0.1	0.03-0.1
Rated electric power	W	450	450	450
Electric power to Q_{MIN}	W	140	140	160
Electric power to Q_N	W	180	180	200
Stand By power	W	3.5	4.0	4.0
Rated voltage	Vac	230	230	230
Rated frequency	Hz	50	50	50
Water inlet / outlet tube diameter	"	1	1	1
Automatic exhaust tube diameter	"	1/2	1/2	1/2
Pump head rating	m	5	5	5
Maximum operating water pressure allowed	bar	2.5	2.5	2.5
Min operating water pressure allowed	bar	0.6	0.6	0.6
Flue gas temperature at reduced power	°C	56.5	62.7	63
Flue gas temperature at rated power	°C	103	136	122
Flue gas reduced power	kg/s	0.0055	0.0065	0.0081
Flue gas rated power	kg/s	0.0128	0.0164	0.0194
Class of the boiler		5	5	5
Combustion period	h	12	12	10
Water supply control valve	°C	65-80	65-80	65-80
Minimum return water temperature	°C	55	55	55
Efficiency at rated power	%	>90	>90	91.4
Noise *	dB	40	40	40

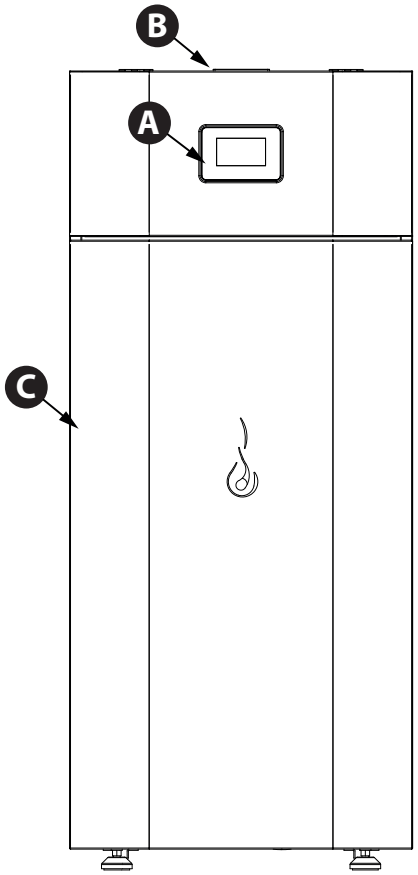
* Value measured in an anechoic chamber with a device operating at rated power.

HP 15		WATER FLOW (kg/h)	WATER SIDE RESISTANCE (mbar)
Temperature jump corresponding	ΔT = 10K	1312	160
	ΔT = 20K	656	40

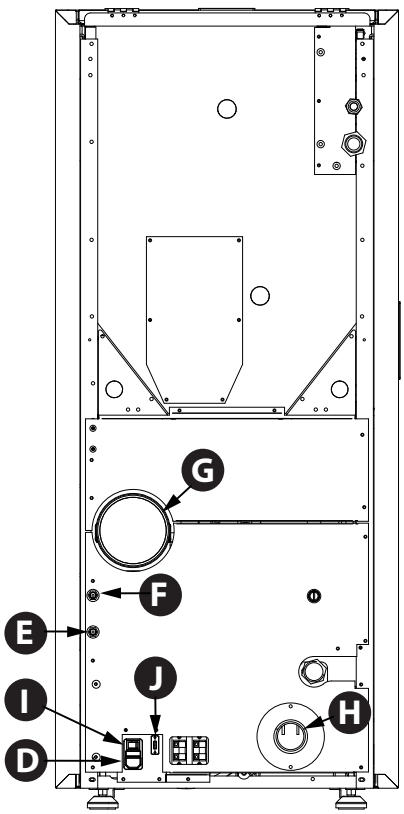
HP 22		WATER FLOW (kg/h)	WATER SIDE RESISTANCE (mbar)
Temperature jump corresponding	ΔT = 10K	1938	367
	ΔT = 20K	969	92

HP 30		WATER FLOW (kg/h)	WATER SIDE RESISTANCE (mbar)
Temperature jump corresponding	ΔT = 10K	2668	687
	ΔT = 20K	1334	172

IDENTIFICATION OF COMPONENTS	
A	Display
B	Pellet tank cover
C	Door
D	Power socket for electric cable
E	Safety thermostat (manual reset) 100°C
F	Safety thermostat (manual reset) 85°C
G	Combustion flue pipe
H	Air intake tube for combustion
I	Main power switch
J	Serial port



HP 15 - 22



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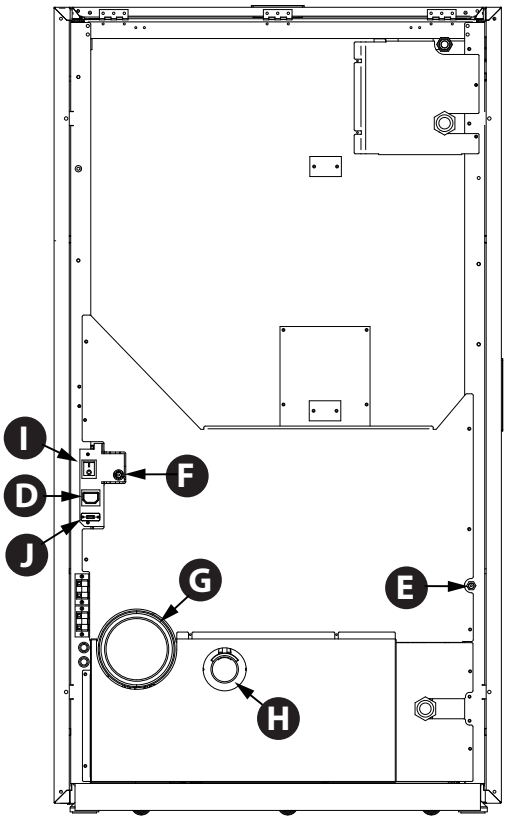


INTRODUCTION

The boilers produced in our factory are built with attention to the individual components so as to protect both the user and the installer from any accidents. It is therefore recommended that after any intervention on the product, the authorised staff pay particular attention to the electric connections, especially the stripped parts of the wires. These must not escape from the terminal board in any situation, thus preventing possible contact with the live parts of the wire.
The instruction manual is an integral part of the product: make sure that it always accompanies the appliance, even if transferred to other owners or user or is transferred to another place. If it is damaged or lost, request another copy from the area technician.
This generator must be intended for the use it has been specifically made for. The manufacturer is exemptded from any liability, contractual and extracontractual, for injury/damage caused to persons/animals and objects, due to installation, adjustment and maintenance errors and improper use.

INSTALLATION

Installation of the generator and auxiliary equipment in relation to the heating system must comply with all current Standards and Regulations and to those envisioned by the law. Installation must be carried out by authorised staff, who must provide the buyer with a declaration of conformity for the system and will assume full responsibility for final installation and as a consequence the correct functioning of the installed product.
It is necessary to bear in mind all laws and national, regional, provincial and town council Standards present in the country the appliance has been installed.
The Manufacturer cannot be held responsible for the failure to comply with such precautions. It is recommended to wash all the pipes of the system well before installation to remove any residue that could compromise the correct operation of the appliance. During installation, inform the user regarding:
a. If water leaks, he must close the water supply and promptly inform the after-sales technical service.
b. The system working pressure must be checked periodically. If the generator is not used for a long period of time, it is recommended to contact the after-sales technical service to carry out at least the following operations:
- Set the master switch to position 0.
- Close the water taps of both the heating system and the domestic hot water system.
- Empty the heating system and the domestic hot water system if there is risk of freezing.

COMMISSIONING

After removing the packaging, ensure that the content is intact and complete.
Otherwise, contact the dealer where the appliance was purchased.
When commissioning the product, verify that all safety and control devices the generator consists of work properly. All electrical components that make up the generator must be replaced with original spare parts exclusively by an authorised technical assistance centre, thereby guaranteeing correct operation.
Before leaving the system, the staff in charge of commissioning must monitor the operation of the generator for at least one complete work cycle. The geneerator must be serviced at least once a year, programming it in advance with the technical assistance centre

STANDARDS

The boilers have been designed and realised in compliance with the following Directives:

- UNI EN 303-5 Boilers for central heating. Boilers for solid fuel, with manual and automatic feeding, with a nominal heat output of up to 500 kW

DIRECTIVES

- 2004/108/EC: EMC directive
- 2006/95/EC: Low voltage directive
- 2006/42/EC: Machinery directive
- 2011/65/EU: RoHS 2" directive

FOR SAFETY

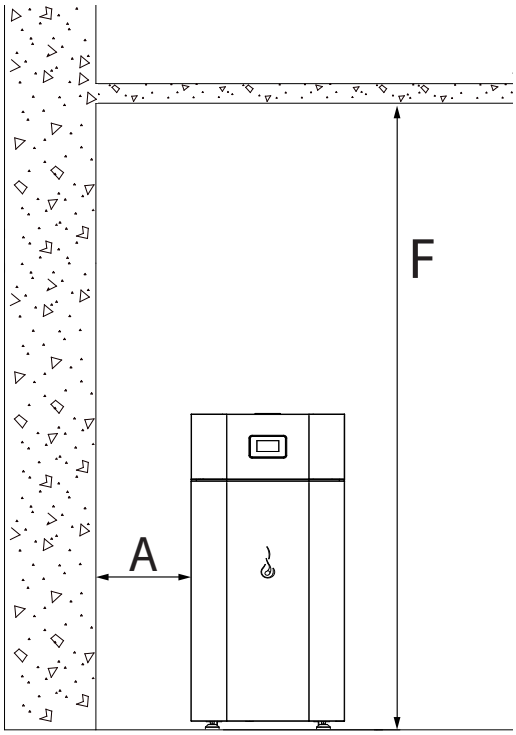
- It is forbidden for the generator to be used by children or unassisted disabled persons.
- Do not touch the generator when you are barefoot or when parts of the body are wet or humid.
- The safety and adjustment devices must not be modified without the authorisation or indications of the manufacturer.
- Do not pull, disconnect, twist electric cables leaving the gnerator, even if disconnected from the electric power supply mains.

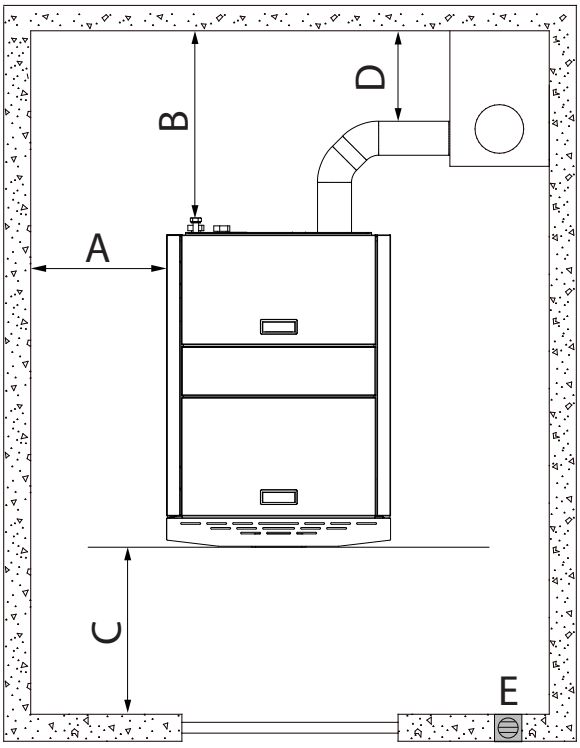
- Do not close or reduce the dimensions of the airing vents in the place of installation.
- The airing vents are indispensable for correct combustion.
- Do not leave the packaging elements within reach of children or unassisted disabled persons.
- The hearth door must always be closed during normal functioning of the product.
- Avoid direct contact with parts of the appliance that tend to heat up during functioning.
- Check for the presence of any obstructions before switching the appliance on following a prolonged standstill period.
- The generator has been designed to function in any climatic condition (also critical). In particularly adverse conditions (strong wind, freezing) safety systems may intervene to switch the generator off.
- If this occurs, contact the technical after-sales service and always disable the safety system.
- If the flue should catch fire, be equipped with suitable systems for suffocating the flames or request help from the fire service.
- If the generator should block, indicated by a signal on the display and that is not relative to lack of routine maintenance, contact the technical after-sales centre.

THESE BOILERS MUST BE USED TO HEAT WATER TO A TEMPERATURE THAT DOES NOT EXCEED BOILING POINT IN THE CONDITIONS OF INSTALLATION.

RECOMMENDED DISTANCES FOR THE BOILER COMPARTMENT

Below are a few images relative to the minimum distances required in the boiler room.
The company recommends the following measurements to be complied with:





REFERENCES	NON-INFLAMMABLE OBJECTS	REFERENCES	NON-INFLAMMABLE OBJECTS
A	500 mm	**D**	300 mm
B	1,000 mm	**E**	> 100 cm^2
C	1,000mm	**F**	230cm

WARNINGS

This instructions manual is an integral part of the product: make sure that it always accompanies the appliance, even if transferred to another owner or user, or if transferred to another place. If it is damaged or lost, request another copy from the area technician. This product is intended for the use for which it has been expressly designed. The manufacturer is exempt from any liability, contractual and extracontractual, for injury/damage caused to persons/animals and objects, due to installation, adjustment and maintenance errors and improper use.

Installation must be performed by qualified staff, which assumes complete responsibility for the definitive installation and consequent good functioning of the product installed. One must also bear in mind all laws and national, regional, provincial and town council Standards present in the country in which the appliance has been installed, as well as the instructions contained in this manual.
The Manufacturer cannot be held responsible for the failure to comply with such precautions.

After removing the packaging, ensure that the content is intact and complete. Otherwise, contact the dealer where the appliance was purchased.
All electric components that make up the product must be replaced with original spare parts exclusively by an authorised after-sales centre, thus guaranteeing correct functioning.

SAFETY

- The generator must not be used by persons (including children) with reduced physical, sensory and mental capacities or who are unskilled persons, unless they are supervised and trained regarding use of the appliance by a person responsible for their safety.
- Children must be checked to ensure that they do not play with the appliance.
- Do not touch the generator when you are barefoot or when parts of the body are wet or damp.
- The safety and adjustment devices must not be modified without the authorisation or indications of the manufacturer.
- Do not pull, disconnect, twist electric cables leaving the stove, even if disconnected from the electric power supply mains.
- It is advised to position the power supply cable so that it does not come into contact with hot parts of the appliance.
- The power supply plug must be accessible after installation.
- Do not close or reduce the dimensions of the airing vents in the place of installation. The airing vents are essential for correct combustion.
- Do not leave the packaging elements within reach of children or unassisted disabled persons.
- The hearth door must always be closed during normal functioning of the product.
- When the appliance is functioning and hot to the touch, especially all external surfaces, attention must be paid
- Check for the presence of any obstructions before switching the appliance on following a prolonged period of inactivity.
- The generator has been designed to function in any climatic condition (even critical). In particularly adverse conditions (strong wind, freezing) safety systems may intervene that switch the generator off. If this occurs, contact the technical after-sales service and always disable the safety systems.
- In the event the flue catches fire, use suitable systems for suffocating the flames or request help from the fire brigade.
- This appliance must not be used to burn waste
- Do not use any flammable liquids for ignition
- During the filling phase do not put the bag of pellets to into contact with the product
- The majolicas are top quality artisan products and as such can have micro-dots, crackles and chromatic imperfections. These features highlight their valuable nature. Due to their different dilation coefficient, they produce crackling, which demonstrate their effective authenticity. To clean the majolicas, it is recommended to use a soft, dry cloth. If a detergent or liquid is used, the latter could penetrate inside the crackles, highlighting them.

ROUTINE MAINTENANCE

Based on Decree 22 January 2008 n°37 art.2, routine maintenance means interventions aimed at reducing degradation due to normal use, as well as dealing with accidental events entailing the need of first interventions, which however do not modify the structure of the system upon which one is intervening or its intended use according to the requirements laid down by the technical standards in force and by the manufacturer's use and maintenance manual.

HYDRAULIC SYSTEM

Certain concepts referring to the Italian UNI 10412-2 (2009) Standard are described in this chapter.
As previously described, when installing, all national, regional, provincial and town council Standards in force provided by the country in which the appliance has been installed must be complied with.

TABLE OF DEVICES FOR CLOSED VESSEL SYSTEM, PRESENT AND NOT PRESENT IN THE PRODUCT	
Safety valve	☑
Pump control thermostat (managed by the water probe and board program)	☑
Acoustic alarm activation thermostat	–
Water temperature indicator (display)	☑
Pressure transducer with display	☑
Acoustic alarm	–
Automatic circuit breater switch (managed by board program)	☑
Pressure transducer with minimum and maximum pressure switch alarm	☑
Water overheating automatic circuit breaker (blocking thermostat)	☑
Circulation system (pump)	☑
Expansion system	☑

During installation of the stove it is MANDATORY to adjust the system with a manometer in order to display the water pressure.

INSTALLATION AND SAFETY DEVICES

The installation, relative system connections, commissioning and inspection of correct functioning must be carried out perfectly, in total compliance with Standards in force, both national, regional and municipal, as well as these instructions.
For Italy, installation must be carried out by professionally authorised staff (Ministerial Decree dated 22.01.08 n°37).
The manufacturer declines all responsibility for damages to objects and/or persons caused by the system.

SAFETY DEVICES FOR CLOSED VESSEL SYSTEM

According to the UNI 10412-2 (2009) Standard in force in Italy, the closed systems must have: safety valve, pump control thermostat, acoustic alarm activation thermostat, temperature indicator, pressure indicator, acoustic alarm, regulation automatic circuit breaker switch, automatic circuit breaker block switch (block thermostat), circulation system, expansion system, safety dissipation system incorporated with the generator with thermal safety valve (self-activated), whenever the appliance does not have a temperature self-adjustment system.

DISTANCES OF SAFETY DEVICES ACCORDING TO THE STANDARD

The temperature safety sensors must be in place on the machine at a distance no greater than 30 cm from the flow connection.

Whenever the generators lack a device, those missing can be installed on the generator flow pipe, within a distance no greater than 1m from the machine.

COMPONENT	DISTANCE
Temperature safety sensors	On the machine or not exceeding 30 cm
Missing devices because not as per standard	Not exceeding one metre, on the flow pipe

The domestic heating appliances with automatic feeding must: be equipped with a fuel block thermostat or with a cooling circuit set up by the appliance manufacturer.
The cooling circuit must be activated by a thermal safety valve, in order to ensure that the limit temperature set forth by the Standard is not exceeded.
Connection between the power supply unit and the valve must be free from interceptions.
The pressure upstream from the cooling circuit must be at least 1.5 bar.

TYPE OF SYSTEM

There are two different types of system:
- Open vessel plant and closed vessel plant.

The product has been designed and realised to work with closed vessel systems.

CLOSED VESSEL PLANT

System in which the water it contains is not in direct or indirect communication with the atmosphere. Generally, the closed vessel system has one of the following expansion vessels:
- Pre-loaded closed expansion vessel with membrane impermeable to the passage of gases.
- Automatic closed expansion system with compressor and membrane impermeable to the passage of gases.
- Automatic closed expansion system with transfer pump and membrane impermeable to the passage of gases.
- Expansion system without diaphragm.

GENERALITY

The closed systems must have:
- Safety valve
- Pump control thermostat
- Acoustic alarm activation thermostat
- Temperature indicator
- Pressure indicator
- Acoustic alarm
- Adjustment automatic circuit breaker switch
- Automatic circuit breaker switch (block thermostat)
- Circulation system
- Expansion system
- Safety dissipation system incorporated with the generator with thermal safety valve (self-activated), whenever the appliance does not have a temperature self-adjustment system

SAFETY VALVES

The load capacity of the safety valve must allow the discharge of a quantity of vapour, not lower than: Q / 0.58 [kg/h] where: Q is the useful outlet power to the generator water expressed in kilowatt. The diameter of the minimum net transversal section of the valve inlet must not be lower than 15 mm. The valve load pressure, equal to the calibration pressure, increased by the overpressure, cannot exceed the maximum exercise pressure of the heat generator. The designer must check that the maximum pressure existing in every point of the system, does not exceed the maximum exercise pressure of its every component . The safety valve must be connected to the upper part of the heat generator or outlet pipes, very close to the generator. The length of the piping between the generator coupling and the safety valve must not exceed 1 m. The piping connecting the safety valve to the heat generator must not be interrupted and must not have, in any point, a cross-section lower than than that of the safety

valve inlet or than the sum of the inlet cross-sections, in the event of several valves serving a single pipe. The discharge piping of the safety valve must be realised in order not to prevent the regular functioning of the valves and not to cause damages to persons; the discharge must flow immediately near the safety valve and be accessible and visible. The diameter of the discharge piping must not however be lower than that of the outlet connection of the safety valve. For diameter of outlet connection it is intended the minimum internal diameter on the valve outlet upstream of the eventual internal threading.

CLOSED EXPANSION VESSEL

Warnings: check that the preload of the expansion vessel is set to 1.5 bar.
The vessel maximum exercise pressure must not be lower than the calibration pressure of the safety valve, increased by overpressures, characteristic of the same valve, bearing in mind the eventual level difference between vessel and valve and the pressure generated by the functioning of the pump. The capacity of the expansion vessel/s is evaluated depending on the total system capacity as results from the project. The closed expansion vessels must comply with the provisions concerning the design, manufacturing, conformity assessment and use of pressure appliances. Intercepting objects or section decreases must be inserted/practiced on the connection piping, which can be constituted by system portions. The insertion of a three-way intercepting valve which allows connection between the vessel and the atmosphere for maintenance Operations, is allowed. Such device must be protected against accidental manoeuvres. The connection pipe must be realised in order not to present scales or deposits storage points. In case of more heat generators which feed the same plant or the same secondary circuit, each heat generator must be connected directly to the expansion vessel or plant expansion vessels unit, altogether dimensioned for the total volume of water contained in the same plant or the same independent circuit. Where it is necessary to separate the individual heat generator from the expansion vessel or expansion vessels unit, a three-way tap must be applied on the connection piping between the generator and the vessel, in order to ensure, in every position, the connection of the generator with the expansion vessel or with the atmosphere. The expansion vessels, the connecting pipes, the bleed pipes and drain pipes must be protected from freezing, where this phenomenon occurs. The solution used for this purpose is described in the design.

COMMISSIONING CHECKS

Before connecting the boiler:
a) wash all system piping in order to remove any residues which might compromise the correct functioning of certain system components (pumps, valves, etc.).
b) check to verify that the flue has adequate draft, is not narrowed and that other appliances do not discharge into the flue.
This is to prevent unexpected power increases. Only after this control can the flue fitting be mounted between the boiler and the flue. A check of the connections with pre-existing flues is recommended.

AUTOMATIC THERMOSTATIC MIXER VALVE (MANDATORY)

It is required to create an adequate anti-condensation circuit that ensures a return temperature for the appliance of at least 55° C. The anti-condensation valve, for example, is applied in solid fuel boilers as it prevents the return of cold water in the heat exchanger.

Routes 1 and 3 are always open and, together with the pump installed on the return, they guarantee water circulation inside the biomass boiler exchanger.

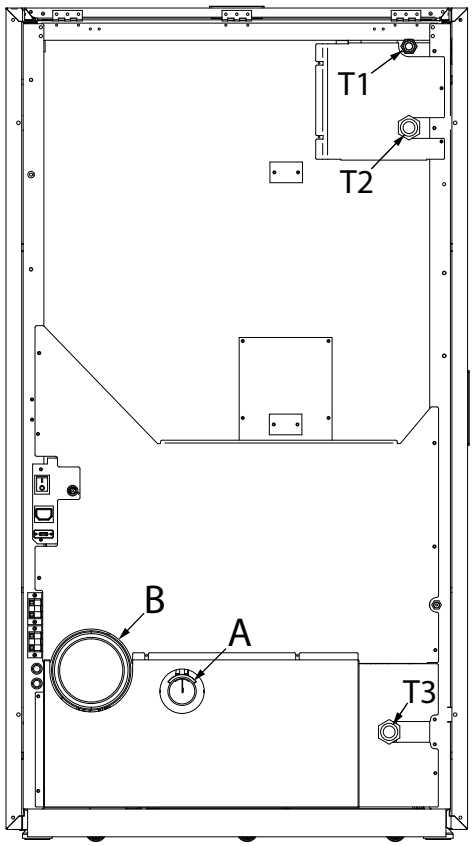
A high return temperature allows efficiency improvement, reduces formation of smoke condensation and prolongs the life span of the generator.

Valves on the market have different calibrations. The manufacturer advises use of model 55°c with 1" hydraulic connections.
Once the valve calibration temperature is reached,
route 2 is opened and the boiler water goes to the system via the flow.

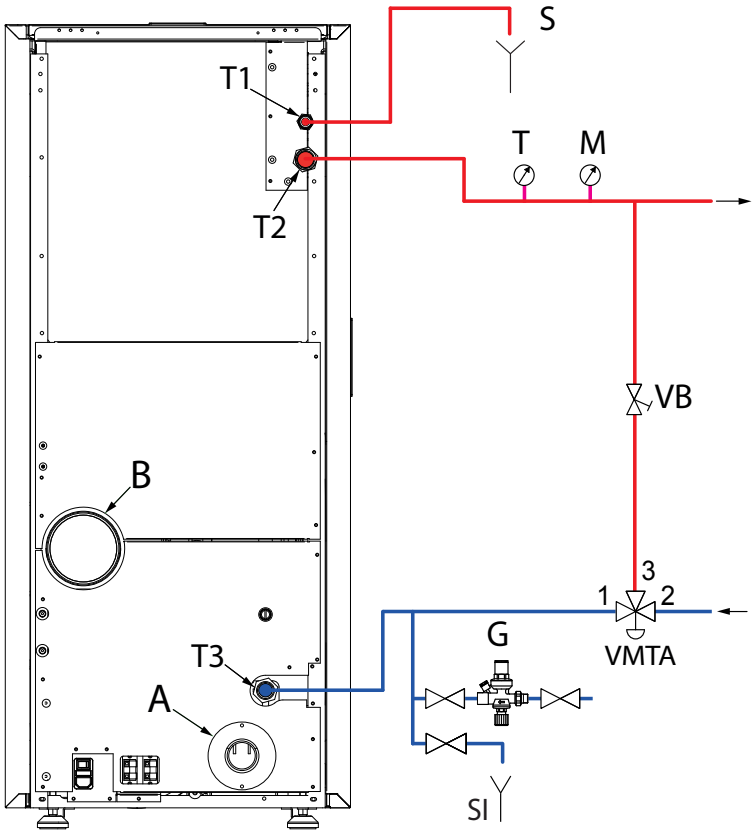
Valve sold as an accessory (optional)

BASIC HYDRAULIC SYSTEM DIAGRAM

HP 30



HP 15/22



KEY	
A	Combustion air inlet
B	Smoke exhaust outlet
T1	3 bar safety valve
T2	Boiler flow/output
T3	Boiler return/inlet
M	Pressure Gauge
T	Thermometer
G	Filling system
S	Safety valve discharge
SI	System exhaust
VB	Balance valve
VMTA	Thermostatic mixer valve 55°C

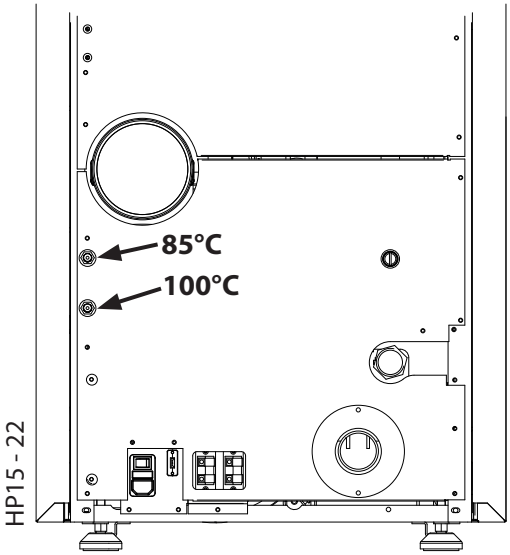
IT IS RECOMMENDED TO CONSULT THE TEMPLATES MANUAL AT FOR FURTHER INFORMATION RELATIVE TO THE HYDRAULIC CONNECTIONS, AIR INTAKE/FLUE EXHAUST AND DIMENSION SPECIFICATIONS OF THE PRODUCT IN QUESTION.

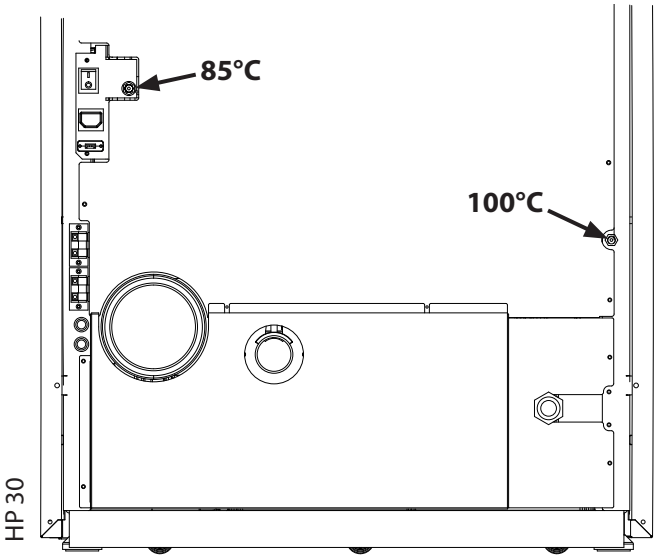
STOVE POSITIONING

For correct product functioning, it is recommended to position it so that it is perfectly level, using a spirit level.

REARMS

The figures below illustrate the positions of the tank (85°C) and H2O (100°C) rearms. Contact the qualified technician if one of the rearms should be triggered, so as to verify the cause.



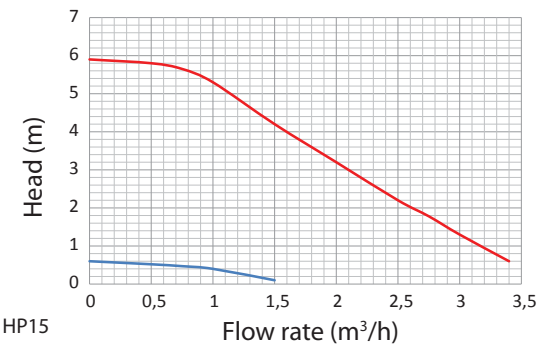


FEATURES

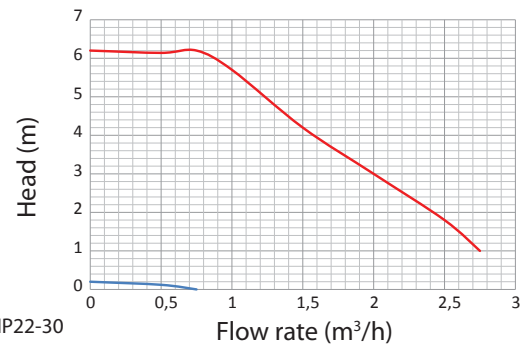
	HP15	HP22	HP30
Water content of the thermo-product heat exchanger (l)	32	32	66
Volume of expansion vessel integrated in the thermo-product (l)	8	8	12
3 bar safety valve integrated in the thermo-product	✓	✓	✓
Minimum and maximum pressure switch integrated into the thermo-product	✓	✓	✓
Pump integrated into the thermo-product	✓	✓	✓
Pump max. head (m)	6	6	6

*** ENVISION A POSSIBLE ADDITIONAL EXPANSION VESSEL DEPENDING ON THE SYSTEM WATER CONTENT.**

The diagram to the side illustrates the behaviour of the pump used on our thermo-products at the speeds that can be set.



HP15



HP22-30

DEVICES

(in the relevant models)

Door micro switch: With the door open, the operation of the burn pot cleaning system is blocked
Electronic pressure switch: in the event of inadequate pression, it sends the machine in alarm conditions
F 2.5 A 250 V fuse (stoves): protects the machine from violent current surges
85°C calibrated mechanical bulb with manual rearm: intervenes by blocking fuel feed if the pellet tank t° reaches the limit of 85°C. **Rearm must be performed by qualified staff and/ or the manufacturer's technical after-sales assistance.**
Pellet tank temperature control probe: if the tank over-heats, the machine automatically modulates to return to normal temperature values
Mechanical air pressure switch: blocks the pellet in the event of insufficient depression

REFERENCE STANDARDS

The installation must be in compliance with:

- **UNI 10683 (2012) heat generators fed with wood and other solid fuels: installation.**

The chimneys must be in compliance with:

- UNI EN 13063-1 and UNI EN 13063-2, UNI EN 1457, UNI EN 1806 in the event of non-metallic chimneys:
- EN 13384-1 (13384) chimneys. Thermal and fluid dynamic calculation methods.
- UNI EN 1443 (2005) chimneys: general requirements.
- UNI EN 1457 (2012) chimneys: clay/ceramic flue liners.
- UNI/TS 11278 (2008) Metal - chimneys/flue liners/flue ducts.
- UNI 7129 point 4.3.3 Fire Brigade provisions, local rules and regulations.

NATIONAL, REGIONAL, PROVINCIAL AND TOWN COUNCIL REGULATIONS

One must also bear in mind all laws and national, regional, provincial and town council Standards present in the country in which the appliance has been installed.

TERMS AND DEFINITIONS

Aeration: Air renewal is required both for the disposal of the combustion products, and to prevent mixtures with a hazardous content of non-combusted gases.

Closed hearth appliance: Appliance designed for operation with closed combustion chamber.

Forced draught appliance: Appliance with ventilation in the fumes circuit and combustion with fumes flow at a positive pressure with respect to the environment.

Chimney: Structure consisting in one or several walls containing one or several outflow airways.
The purpose of this predominantly vertical element is to expel the combustion products at a convenient height from the ground.

Smoke duct: Component or components that connect the outlet of the heat generator to the chimney.

Chimney cap: Device that placed on the chimney outlet allows the dispersion of the combustion products even in presence of adverse weather conditions.

Condensation: Liquid products which form when the fumes temperature is lower or equal to the water dew point.

Ducting pipe: Pipe made up of one or several predominantly vertical elements, specifically suitable for collecting and expelling the fumes, as well as to withstand the relative components and any condensate over time,
suitable to be installed in a chimney, existing or new technical compartment, even in new buildings.

Sealed installation: Installation of an appliance with sealed operation, so that all the air required for combustion is taken from outside.

Maintenance: Set of procedures required to ensure and maintain safety and functionality over time and maintain the efficiency of the system within the prescribed parameters.

Chimney system: Chimney installed using a combination of compatible components, manufactured or specified by a sole manufacturer whose product liability covers the entire chimney.

Fumes exhaust system: Flue gas exhaust system, independent from the appliance made up of a smoke duct, chimney or individual flue and chimney cap.

Radiation area: Area immediately in front of the hearth in which the radiant heat caused by combustion is diffused.

Reflux area: Area beyond the extrados of the roof in which overpressure or depressions occur, which may affect the proper discharge of the combustion products.

FUNCTIONAL OPERATIONS DIAGRAM

State of the art installation and proper system operation include a series of activities:

1. Preliminary activities:

- Verification of the suitability of the power of the heat generator based on the characteristics of the system
- verification of the suitability of the installation site,
- verification of the suitability of the fumes exhaust system,
- verification of the suitability of the outside air inlets;

2. Installation:

- implementation of ventilation and connection to the outer air inlets,
- implementation and connection to the fumes exhaust system,
- assembly and installation,
- electric and hydraulic connections,
- installation of insulation,
- ignition and operation test,
- installation of finishings and coverings;

3. Issue of complementary documentation;

4. Inspection and maintenance.

Other actions may be required in relation to specific requests of the competent authority.

PRELIMINARY ACTIVITIES

GENERAL

Verification of compatibility of the system, of any restrictions required by local administrative regulations, special or conventional requirements resulting from condominium regulations, constraints, laws or administration deeds must precede any other assembly or installation operation.

One must especially verify the suitability:

- of the installation premises, of the appliances already installed in the installation premises and in the adjacent and adjoining premises, also powered by different fuels, with particular reference to non-compliant installations.

- of the fumes exhaust system
- of the outside air inlets

SUITABILITY OF THE FUMES EXHAUST SYSTEM

Installation must be preceded by a compatibility test between the appliance and the fumes exhaust system, by verifying:

- the existence of documentation relating to the system;
- existence and content of the chimney plaque;
- suitability of the internal section of the chimney;
- absence of obstructions all along the chimney;
- predominantly vertical height and development of the chimney;
- existence and suitability of the chimney cap;
- distance of the outside wall of the chimney and of the smoke duct from
- combustible materials;
- chimney type and material;
- absence of other chimney connections.

INSTALLATION

Installation in premises with fire hazards is forbidden. Installation in residential premises (except for sealed operation appliances) is also forbidden:

- in which there are liquid fuel-operated appliances with continuous or intermittent operation, which draw the combustion air in the room in which they are installed, or
- in which there are type B gas appliances intended for room heating, with or without production of domestic hot water and in adjacent and adjoining premises, or
- in which, in any case, the depression measured during installation between the internal and external environment is greater than 4 Pa

Installations in bathrooms, bedrooms and studio flats

Installation in bathrooms, bedrooms and studio flats is only allowed for sealed or closed hearth appliances with ducted combustion air taken from the outside.

Installation premises requirements

The support surfaces and/or points must have a suitable load-bearing capacity to support the weight of the appliance, of the accessories and coatings.
The adjacent, side and rear walls and the supporting surface must be made of non-combustible material. Installation near combustible materials or those sensitive to heat is permitted as long as there is a suitable safety distance, which for pellet stoves is equal to:

REFERENCES	INFLAMMABLE OBJECTS	NON-INFLAMMABLE OBJECTS
A	200 mm	100 mm
B	1500 mm	750 mm
C	200 mm	100 mm

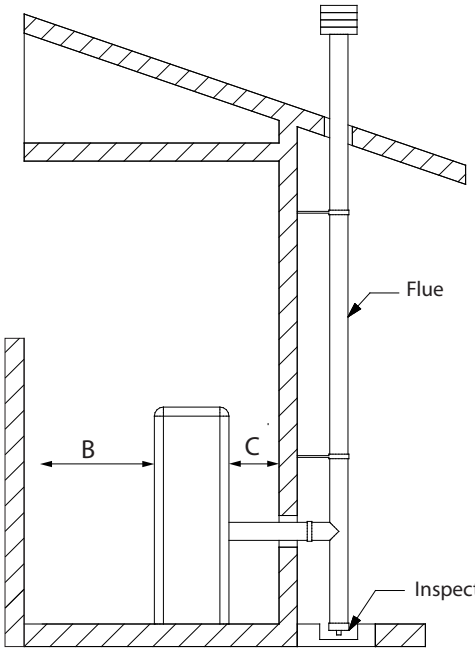


figure 1

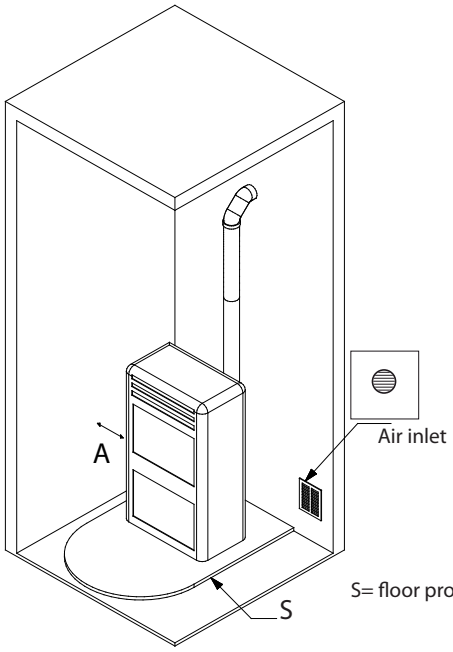


figure 2

In any case the temperature of the adjacent combustible materials must not reach a temperature equal to or greater than the room temperature increased by 65°C.
The minimum volume of the premises in which to install the appliance must be greater than 15 m^3.

INSERTS INSTALLATION

In the event of installation of inserts, access to the internal parts of the device is to be prevented and, during extraction, it should not be possible to access to live parts.

Any wiring, such as a power supply cable or room sensors must be positioned so as not to be damaged during movement of the insert, or come into contact with hot parts.

VENTILATION AND AERATION OF THE INSTALLATION PREMISES

Ventilation is deemed sufficient when the room is equipped with air inlets according to the table:
Air inlet
See figure 2

Appliance categories	Reference standard	Percentage of the net opening section with respect to the appliance fumes outlet section	Minimum net opening value of the ventilation duct
Pellet stoves	UNI EN 14785	-	80 cm^2
Boilers	UNI EN 303-5	50%	100 cm^2

In any case ventilation is deemed sufficient when the pressure difference between the external and internal environment is equal to or less than 4 Pa.
In the presence of type B gas appliances with intermittent operation not intended for heating, they must have their own aeration and/or ventilation opening. The air inlets must meet the following requirements:

- they must be protected with grids, metal mesh, etc., but without reducing the net useful section;
- they must be made so as to make the maintenance operations possible;
- positioned so that they cannot be obstructed;

The flow of clean, uncontaminated air can also be obtained from a room adjacent to that of installation (indirect aeration and ventilation), as long as the flow takes place freely through permanent openings communicating with the outside.
The adjacent room cannot be used as a garage, warehouse of combustible material or for any other activity with a fire hazard, bathroom, bedroom or common room of the building.

FUMES EXHAUST SYSTEM

GENERAL REQUIREMENTS

The heat generator works in a vacuum and has an output fan for fume extraction. Each appliance must be connected to a suitable fumes exhaust system and ensure adequate dispersion of the combustion products into the atmosphere. The combustion products must discharged above the roof. Direct discharge from the wall or towards closed spaces is forbidden, even with clear skies.
In particular, it is forbidden to use flexible and extendible metal pipes.
The chimney should only receive the exhaust of the smoke duct connected to the appliance; collective flues or conveying exhausts from hoods above cooking appliances of any kind, or exhausts from other generators into the chimney itself or smoke duct are not allowed.
The smoke duct and the chimney must be connected with a continuity solution, in order to prevent the chimney from resting on the appliance.
It is forbidden to have other air supply channels and pipes for plant engineering transit inside the fumes exhaust systems, especially if over-sized.

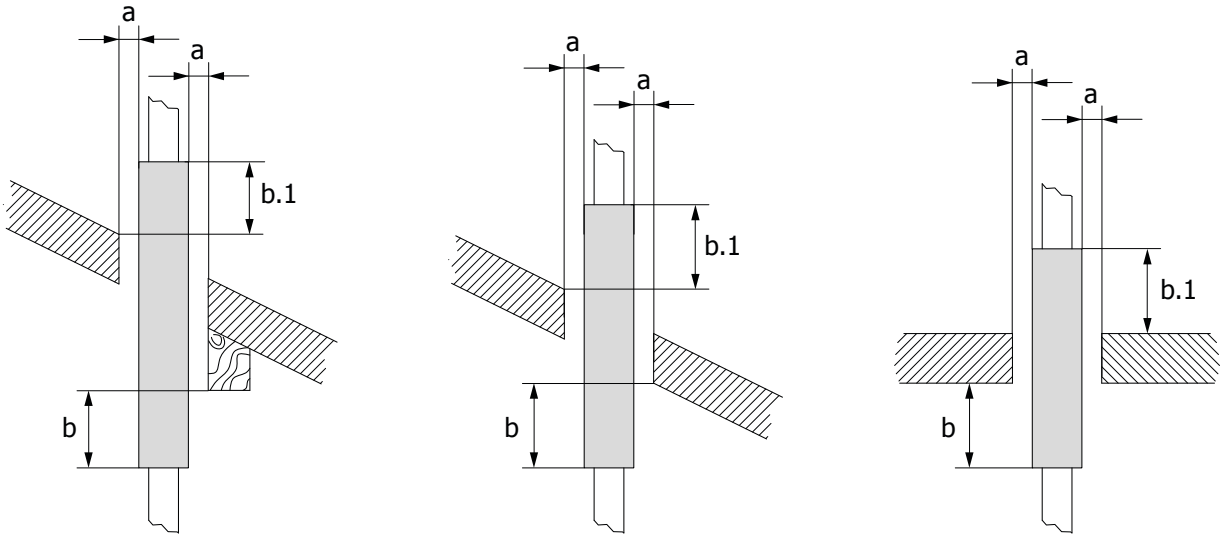
The components of the fumes exhaust system must be chosen in relation to the type
of appliance to be installed in compliance with:

- in the event of metal chimneys, UNI/ TS 11278, with particular attention to what is stated in the specification;
- in the event of non-metallic chimneys: UNI EN 13063-1 and UNI EN 13063-2, UNI EN 1457, .-UNI EN 1806; considering especially:
- temperature class;
- pressure class (fumes seal) at least equal to the seal required for the appliance;
- moisture resistance (resistance to condensation);
- class or level of corrosion and specification of the materials constituting the inner wall in contact with the fumes.
- soot fire resistance class;
- minimum distance from combustible materials
- Where due to high efficiency a pellet stove has fumes at a temperature of less than 160°C + ambient (see technical data) it must be resistant to moisture.

The installer of the fumes exhaust system, once the installation is complete and the relevant checks and inspections have been made, must fix the chimney plaque supplied by the manufacturer with the product in a visible manner, near the fireplace, and which must be completed with the following information:

- nominal diameter;
- distance from combustible materials, indicated in millimetres, followed by the arrow and flame symbol;
- installer data and date of installation.

Every time one must cross combustible materials, the following indications must be complied with:

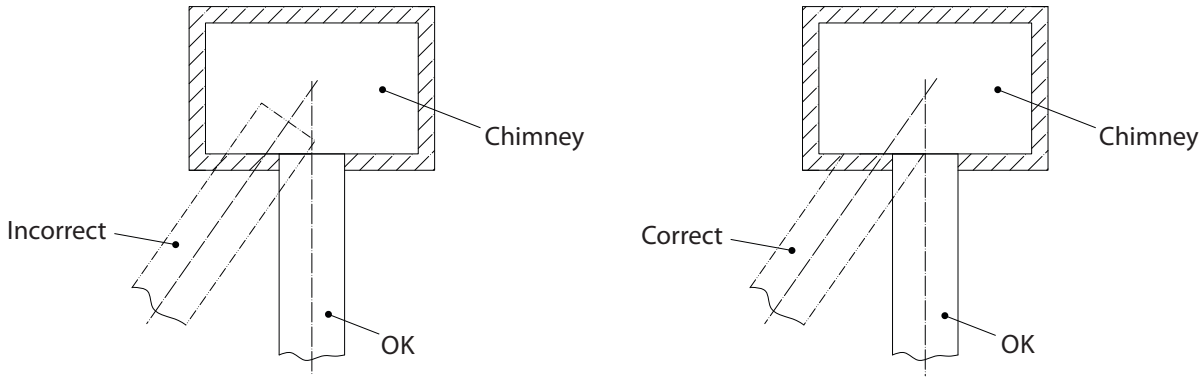


SYMBOL	DESCRIPTION	QUOTA[MM]
b	Minimum distance of combustible materials from the intrados of the framework/floor/wall	500
b.1	Minimum distance of combustible materials from the extrados of the framework/floor	500
a	Minimum distance from combustible materials defined by the manufacturer	G(xxx)
The single wall pipes are indicated in white. The insulated double wall chimney systems are indicated in grey.		
One can disregard the quota only in the event of using an appropriate heat protection screen (for example: wall plate) to protect the intrados of the framework/floor		

SMOKE DUCT

General requirements
The smoke ducts must be installed in compliance with the following general requirements:

- be equipped with at least one sealed outlet for eventual fumes sampling;
- they must be insulated if they cross through rooms that are not to be heated or outside the building;
- they must not cross rooms in which the installation of combustion appliances is forbidden, nor in other premises compartmentalised against fire or with a fire hazard, nor in rooms and/or areas that cannot be inspected;
- they must be installed so as to allow normal thermal expansion;
- they must be fitted to the opening of the chimney without protruding inwards;
- the use of flexible metal pipes to connect the appliance to the chimney is not allowed;



- counter-slope sections are not allowed;
- the smoke ducts must have, along their entire length, a diameter that is no less than that of the attachment of the appliance exhaust pipe; any section changes are allowed only on the inlet to the chimney;
- they must be installed so as to limit the formation of condensation and prevent their release from the joints;
- they must be positioned at a distance no less than that indicated in the product specifications from combustible materials;
- the smoke channel/duct must allow to collect the soot and to be cleaned using a swab and inspected after being disassembled, or through inspection openings when not accessible from inside the appliance.

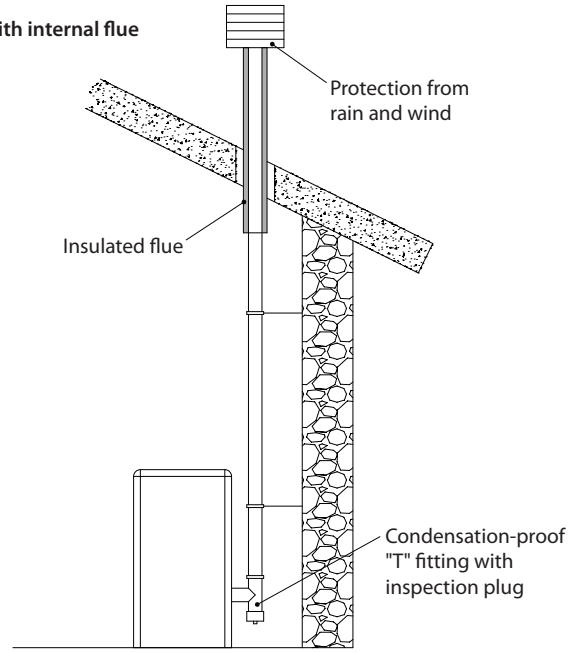
ADDITIONAL REQUIREMENTS FOR APPLIANCES FITTED WITH AN ELECTRIC FAN FOR FUMES EXPULSION

For the heat generator appliances equipped with electric fan for expelling fumes, the instructions below must be followed:

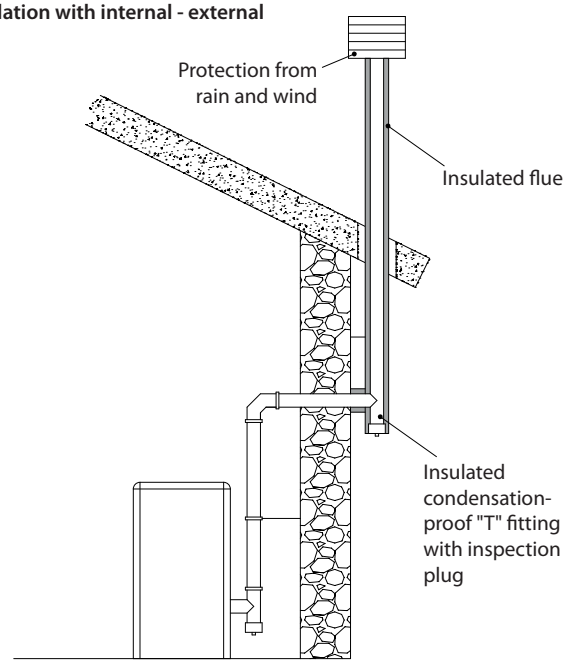
- The horizontal sections must have a minimum upward slope of 3%
- The length of the horizontal section must be minimal and, in any case, no longer than 3 metres
- The number of direction changes including the one due to the use of the "T" element must not be more than 4.

EXAMPLES OF CORRECT CONNECTION TO THE CHIMNEY

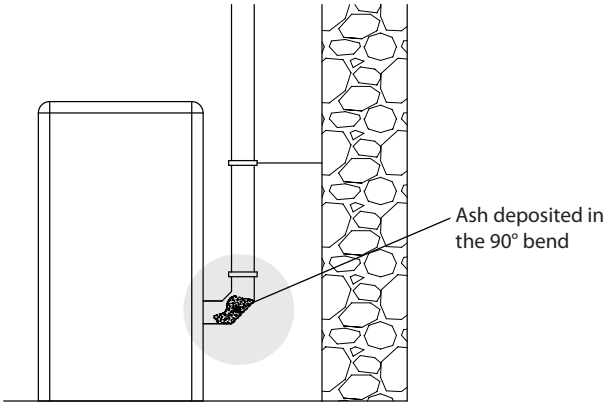
Installation with internal flue

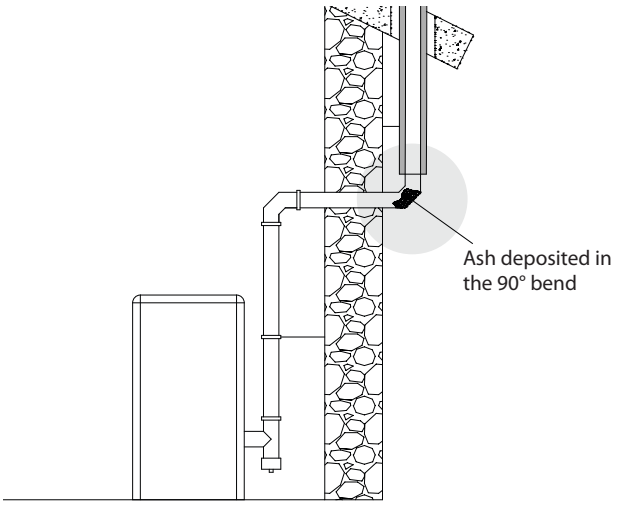


Installation with internal - external flue

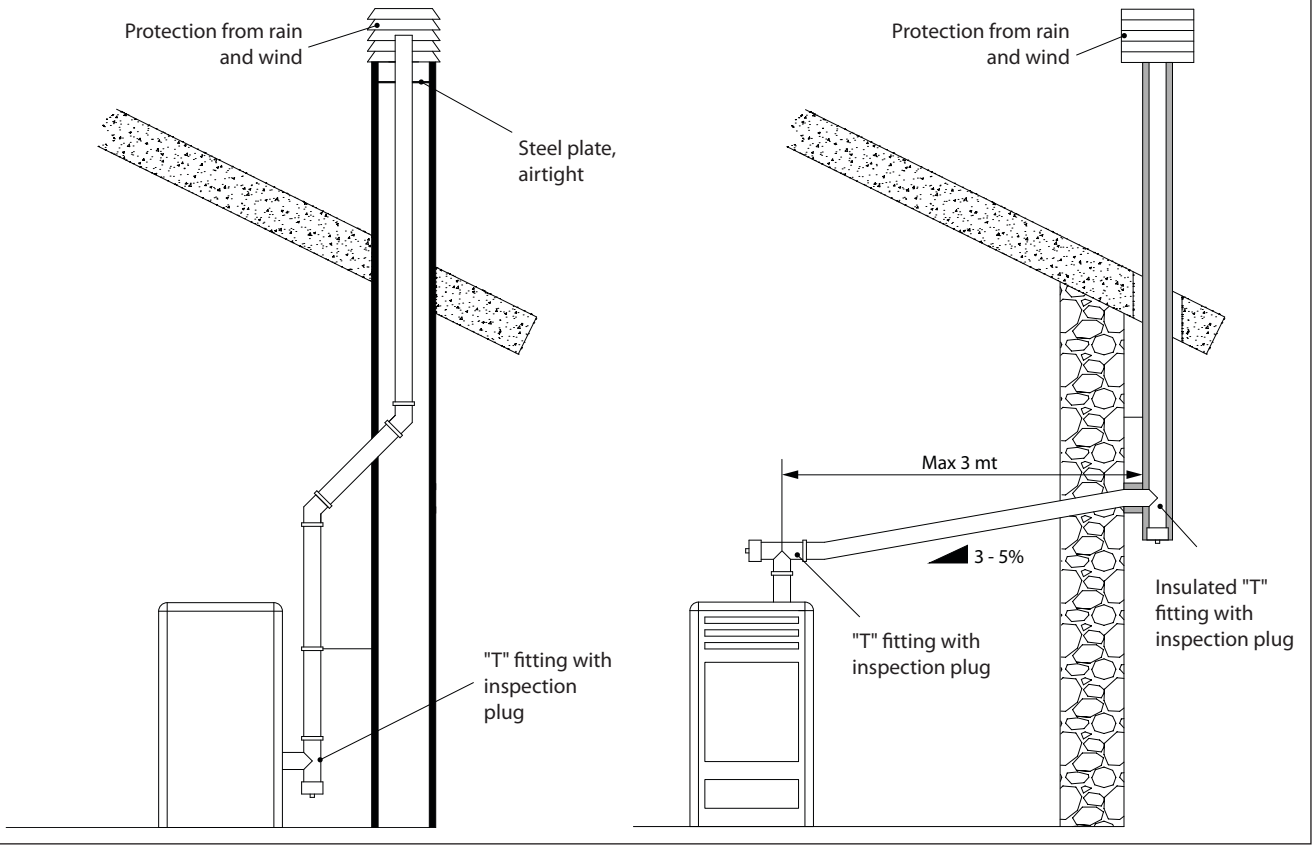


IT IS NOT RECOMMENDED TO INSTALL A 90° BEND AS THE FIRST INITIAL PART, SINCE THE ASH WOULD BLOCK THE PASSAGE OF THE FUMES IN A SHORT TIME, CAUSING PROBLEMS TO THE GENERATOR DRAUGHT.:





EXAMPLES OF CORRECT CONNECTION TO THE CHIMNEY


Protection from rain and wind
Steel plate, airtight
"T" fitting with inspection plug
Protection from rain and wind
Max 3 mt
3 - 5%
"T" fitting with inspection plug
Insulated "T" fitting with inspection plug

It is mandatory to use airtight pipes.

CHIMNEY

In addition to the general requirements, the chimneys for releasing combustion products into the atmosphere must:

- operate under negative pressure (operation under positive pressure is not allowed);
- have a preferably circular internal section; square or rectangular sections must have rounded corners with a radius of no less than 20 mm (hydraulically equivalent sections may be used, as long as the ratio between the longer side and the shorter side of the rectangle, which circumscribes the section, is in any case no greater than 1.5);
- be designed for fumes be designed for fumes expulsion;
- be predominantly vertical and have no narrowing along their entire length;
- have no more than two direction changes with a slope angle no greater than 45°;
- be fitted with, in the event of operating in damp conditions, a device for reflux drainage (condensation, rainwater);

Ducted system

A ducted system can be installed with one or more ducts, operating only with negative pressure with respect to the environment.

The flexible hose compliant with UNI EN 1856-2, with T400-G characteristics, meets the requirements.

CHIMNEY CAPS

The chimney caps must meet the following requirements:

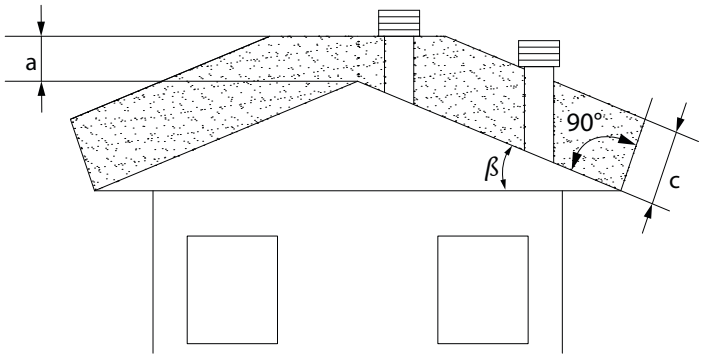
- they must have a useful outlet section no less than double of that of the chimney/ducted system on which it is installed;
- they must be adapted in order to prevent the penetration of rain and snow in the chimney/ducted system;
- they must be built so that, in the event of winds coming from all directions and from any angle, the expulsion of combustion products is in any case ensured;
- they must be free from mechanical intake aids.

COMBUSTION PRODUCTS OUTLET QUOTA

The outlet quota is determined by measuring the minimum height between the roof covering and the lower point of the fumes expulsion section into the atmosphere; this quota must be outside the reflux area and at an adequate distance from obstacles which hinder or make the expulsion of the combustion products difficult or from openings or accessible areas.

Reflux area
The outlet quota must be outside the reflux area calculated according to the indications below.
Near the ridge one considers the lowest between the two.

Buffer area for outlet quota



Clear area for outlet quota above the roof slope (β >10°)

REFERENCE	DESCRIPTION	CLEAR AREA (MM)
c	Distance measured at 90° from the roof surface	1300
a	Height above the ridge of the roof	500

The outlet of a chimney/ducted system must not be near obstacles that may create turbulence areas and/or prevent proper expulsion of combustion products and maintenance operations to be carried out on the roof.
Verify the presence of other chimney caps or skylights and dormers.

FUMES EXHAUST SYSTEM PRODUCT REQUIREMENTS

Temperature class

In the event of a pellet appliance, temperature classes below T200 are not allowed.

Soot fire resistance class

The fumes exhaust system interlocked with appliances supplied by solid fuels require soot fire resistance, and the specification must be indicated by the letter G followed by the distance from combustible materials in millimeters (XX) (in compliance with UNI EN 1443) .

In the event of pellet appliances, the fumes exhaust systems must be airtight; if double designation elements are used (G and O, with or without seal elastomer) for connecting the appliance to the chimney, one must comply with the minimum distance XX in millimeters, indicated for designation G; in the event of fire due to soot, one must ensure the restoration of the initial conditions (by replacing the gaskets and damaged items and cleaning those remaining in use).

Ignition tests

Operation of the appliance must be verified with an ignition test, i.e.:

- for mechanical feed appliances, one must complete the ignition test, verify proper operation for at least the next 15 minutes and adjust the switch-off;

For appliances installed in a hot water heating system (closed fireplaces, thermo-stoves), testing must also extend to the entire hydraulic circuit.

Coverings and finishings

The coverings and finishings must only be applied after having verified the proper operation of the appliance according to the indicated modalities

TECHNICAL INSTALLATION DOCUMENTATION

When installation is complete, the installer must provide the owner or person acting for him, according to the legislation in force, with the declaration of conformity, supplied with:

1) the use and maintenance manual of the appliance and of the system components (such as for example, the smoke ducts, chimney, etc.);
2) photocopy or photograph of the chimney plaque;
3) system booklet (where applicable).

The installer must ask to be issued with a receipt stating that the documentation has been provided, and must keep it with a copy of the technical documentation relating to the installation.

Installation performed by several parties

If the individual installation steps are carried out by different parties, each must document the work carried out for the customer and the for the operator working on the next step.

INSPECTION AND MAINTENANCE

Frequency of operations
Maintenance of the heating system and of the appliance must be carried out on a regular basis according to the table below:

TYPE OF APPLIANCE INSTALLED	<15kW	(15- 35) kW
Pellet operated appliance	1 year	1 year
Water operated appliances (closed fireplaces, thermo-stoves, thermo-kitchens)	1 year	1 year
Boilers	1 year	1 year
Fumes exhaust system	4 t of fuel used	4 t of fuel used

For further details refer to the "cleaning and maintenance" chapter.

Inspection and maintenance report

At the end of the inspection and/or maintenance operations, a report must be issued and released to the owner, or person acting for him, who must confirm its receipt in writing. The report must indicate the situations encountered, the action taken, any components replaced or installed and any comments, recommendations and requirements.
The report must be kept with the relative documentation.

In the inspection and maintenance report one must mention:

- anomalies detected that cannot be removed, which pose a risk to the safety of the user or serious damage to building;
- components that have been tampered with.

If anomalies as per above were detected, the owner, or person acting for him, must be warned in writing, in the maintenance report, to refrain from using the system until the safety conditions have been fully restored.

The inspection and maintenance report must include the main information of the technician or company who performed the inspection and/or maintenance operations, with their contact details, date of intervention and the signature of the operator.

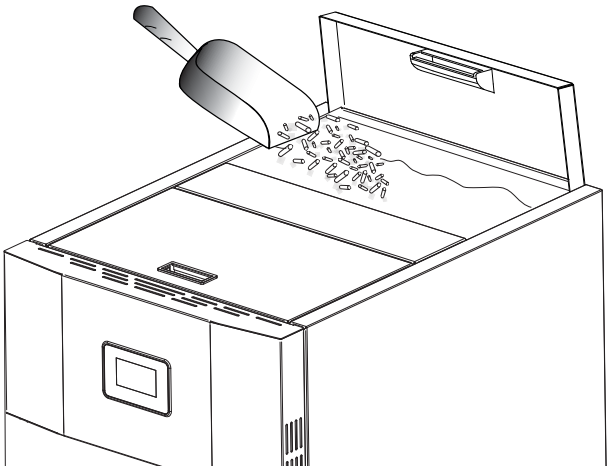
PELLETS AND FEEDING

Pellets are made by applying high pressure to sawdust, or wood waste products (not containing paint) from sawmills, carpentry and other activities related to processing and working with wood. Given that it does not use any glue to hold it together this type of fuel is completely environmentally friendly. In fact the compactness of the pellets over time is guaranteed by a natural substance found in the wood itself: wood coal. In addition to being an environmentally friendly fuel in that it pushes wood residues to the limits pellets also have technical advantages. While wood has a calorific value of 4.4kWh/kg. (with 15% humidity after around 18 months of seasoning) the calorific value of pellets is 5 kWh/kg. Pellet density is 650kg/m3 and the water content is equal to 8% of its weight. For this reason they do not require seasoning in order to arrive at a sufficiently adequate degree of heat yield.

The pellets used must comply with the characteristics described by the following standards:

- **EN PLUS - UNI EN 16961 - 2 class A1 or A2**
- **Ö-NORM M 7135**
- **DIN PLUS 51731**

The manufacturer always recommended using pellets with a diameter of 6 mm with its products.



PELLET STORAGE

In order to ensure problem-free combustion pellets must be stored in a dry place.
Open the tank lid and load the pellets using a scoop.

THE USE OF EXPIRED PELLETS OR ANY OTHER MATERIAL WILL AFFECT THE FUNCTIONALITY OF YOUR GENERATOR AND MAY LEAD TO THE TERMINATION OF THE WARRANTY AND CESSATION OF ANY ACCOMPANYING RESPONSIBILITY ON THE PART OF THE MANUFACTURER

TOUCH SCREEN DISPLAY

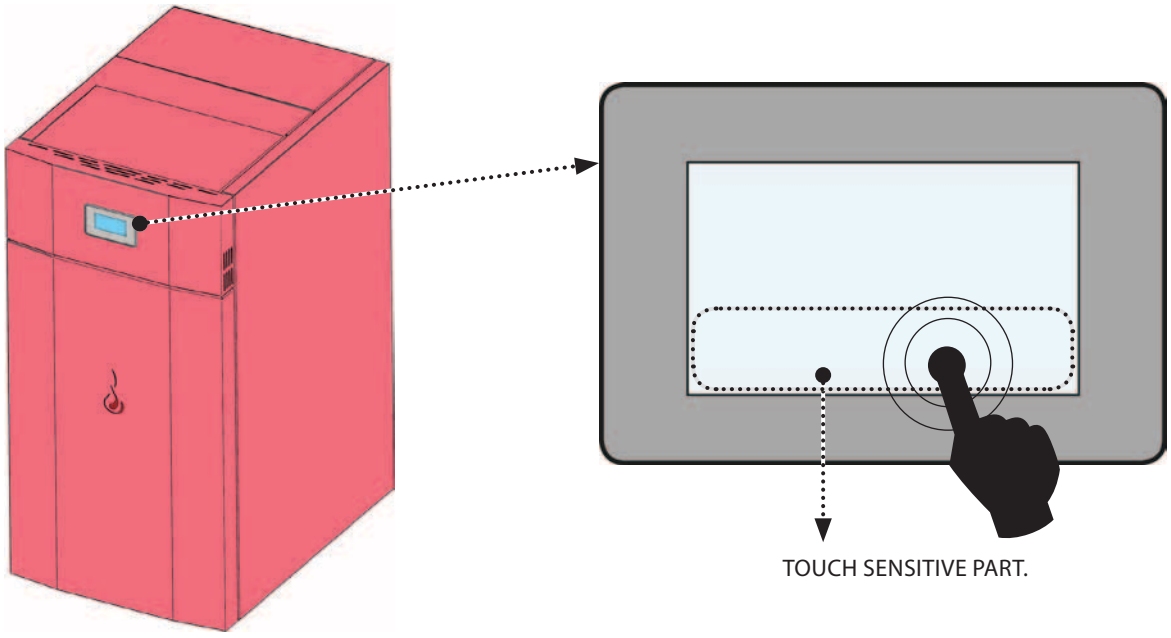
The boiler is equipped with a modern touch-screen display that allows the adjustment of the individual device functions in an easy and intuitive way to the user.

All adjustments and settings depicted in the screens can be performed directly via the integrated touch-screen display.

Tapping the buttons (icons) on the display surface the different actions are activated. The surface of the touch-screen display reacts with the touch of a finger.

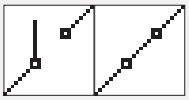
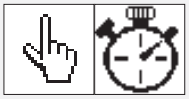
WARNING

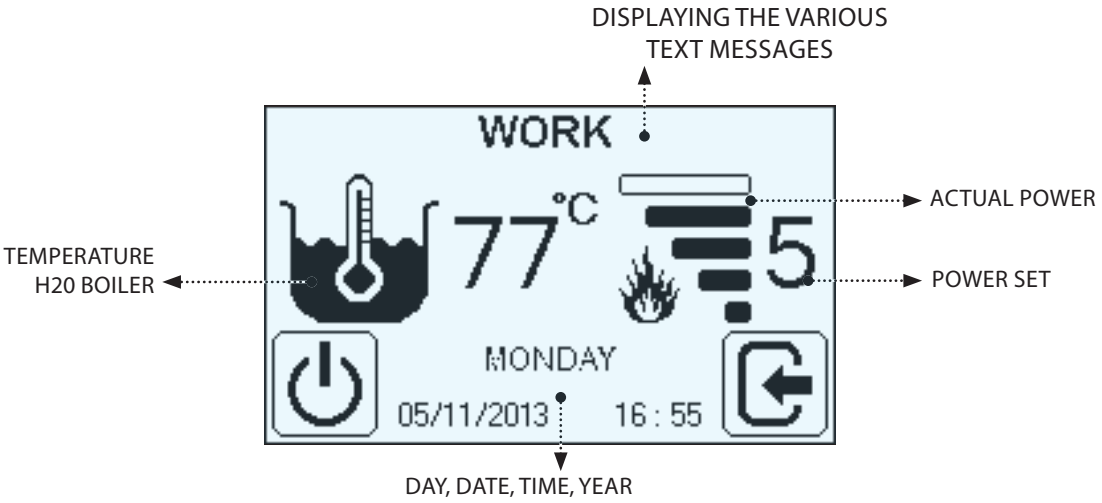
- Do not use protective films, this may cause the malfunction of the display
- Do not put the touch screen to direct or indirect contact with the water. The touch screen display may malfunction in humid conditions or when exposed to water.
- To avoid damaging the touch-screen display, it should not be touched with sharp objects and too much pressure must be exerted with your fingers.



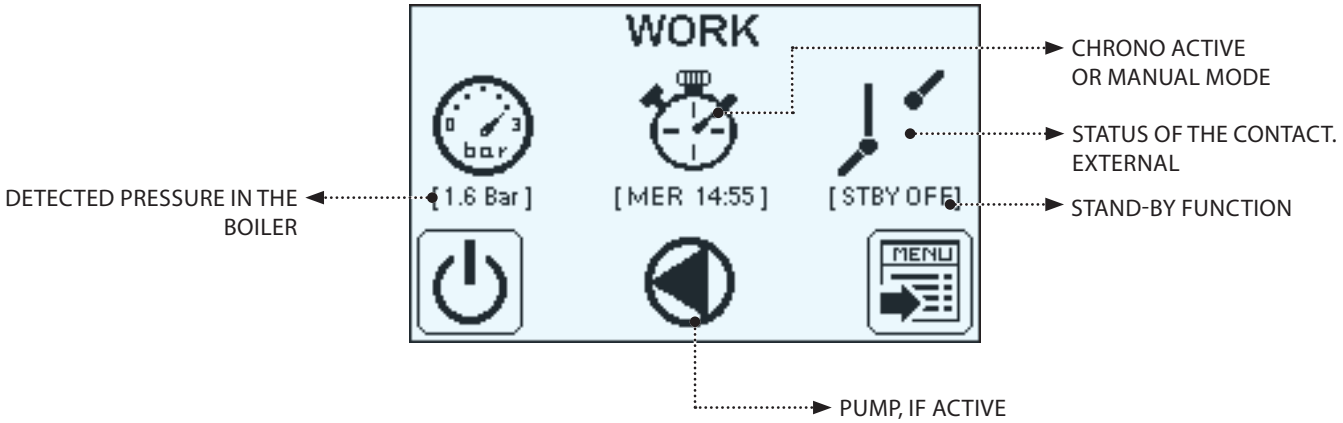
The manufacturer has an additional card option that allows the boiler, the following additional functions in system management. The table below shows the various possibilities which the optional can offer.	
Management of domestic water accumulation	✓
Puffer management	✓
3 heating areas	✓
Option of instant domestic water	✓
Management puffer pump or 4th heating area	✓
Anti-Legionnaires' disease management for domestic water accumulation	✓
Chrono domestic water management accumulation	✓
Auxiliary output management and control	✓

CONTROL PANEL AND ICONS

ICON	MEANING
	• Indicates the presence of an alarm. The machine will turn off.
	• This indicates the system pressure detected by the machine.
	• It indicates the pump operation: Off = pump OFF; ON = pump on Flashing ling = the safety device is active (H2O temperature > 85°C)
	• Indicates the contact of the external additional thermostat Contact closed: the contact of the additional external thermostat is closed. Contact open: the contact of the additional external thermostat is open.
	• Indicates the operating status of the machine, with manual operation or weekly programming. Hand icon: the weekly programming function is off (manual management) Chrono icon: activates the weekly programming function

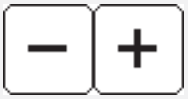


By briefly pressing appear additional information, such as:

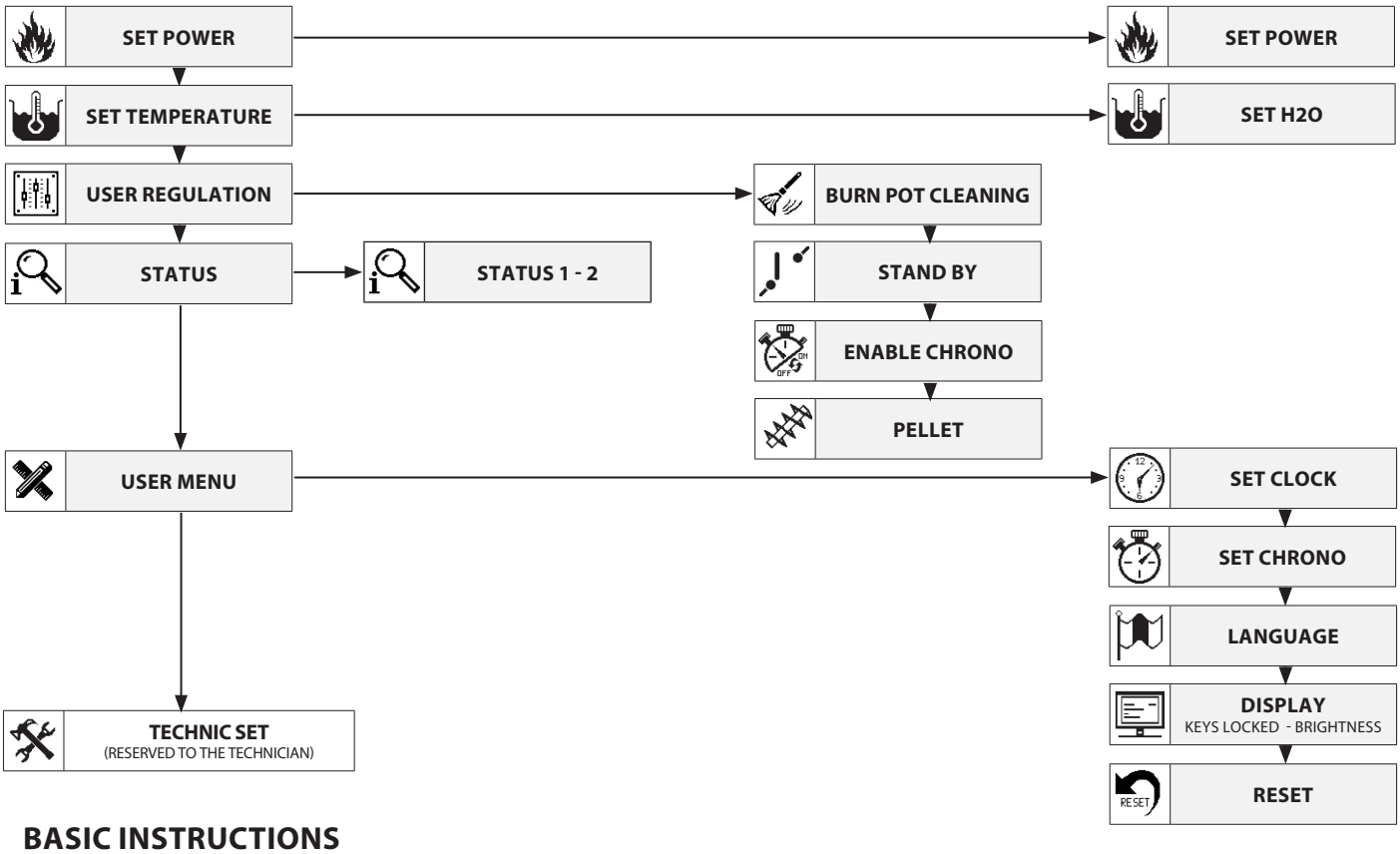


KEY FUNCTIONS

KEY	FUNCTION
	Press and hold for more than 2 seconds to turn on or turn off the boiler.
	Press and hold for more than 2 seconds to exit the menu. Briefly pressing you can go back to a step.
	Allows access to additional info.
	Allows access to the user menu.

KEY	FUNCTION
	Allows increases/select (+) or decrease (-) a mode (SET)
	Allows you to scroll through the menus
	Allows to enable (ON) or disable (OFF)
	It allows to go back a step if pressed briefly, if held longer allows to exit until the main scream.

MENU STRUCTURE



BASIC INSTRUCTIONS

The following recommendations must be followed the first times the generator is ignited:

- It is possible that slight odours are produced due to the drying of the paints and silicones used. Do not remain in the environment for long periods.
- Do not touch the surfaces as they could still be unstable.
- Air the room well several times.
- The hardening of the surfaces is terminated after several heating processes.
- This appliance must not be used to burn waste.

Before igniting the generator, the following points must be verified:

- The hydraulic system must be completed in compliance with the guidelines of the regulations and the manual.
- The tank must be full of pellets
- The combustion chamber must be clean
- The burn pot must be completely free and clean
- Check the hermetic closure of the fire door and the ash drawer
- Check that the power supply cable is connected correctly
- The bipolar switch in the rear right part must be positioned on 1.

COMMISSIONING SETTINGS

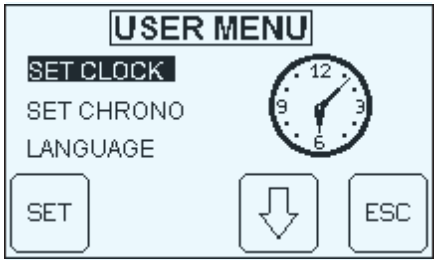
Once the power cable at the back of the generator has been connected, move the switch, located on the back, to position (I).
The switch at the back of the generator powers the generator board.
The generator stays off and the panel shows an initial screen with the word OFF.

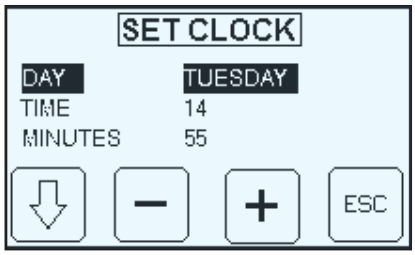
MAINS FREQUENCY 50/ 60HZ

In the event the generator is installed in a country with 60Hz frequency, the generator will display "wrong mains frequency". Change in the frequency to 60Hz.

SET CLOCK

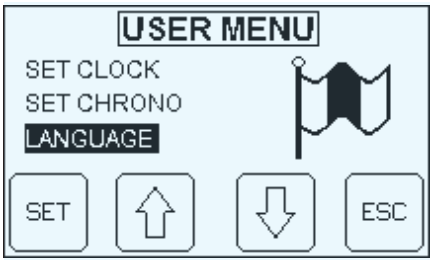
Setting the clock allows to adjust the time and date





SET LANGUAGE

It enables the user to select one of the available languages. Italian - English - French - German - Spanish



DO NOT USE ANY INFLAMMABLE LIQUIDS FOR IGNITION!
DO NOT ALLOW THE BAG OF PELLETS TO COME INTO CONTACT WITH THE HOT GENERATOR!
IN THE EVENT OF CONTINUOUS NO IGNITION, CONTACT AN AUTHORISED TECHNICIAN.

OPERATION AND LOGICS

IGNITION
Once you have checked the "basic instructions" listed above, press the ⏻ for more than two seconds to turn on the generator. 15 minutes are available for the ignition phase. After ignition and having reached the control temperature, the generator stops the ignition phase and passes to STARTING.

STARTING
During the start-up phase, the generator stabilises combustion, increasing it progressively, then switching to WORK mode.

WORK
During the work phase, the generator reaches the set power; see following item.

ADJUSTMENT SET POWER
Set the operating power from 1 to 5.
Power 1 = minimum level - Power 5 = maximum level.

ADJUSTMENT SET TEMPERATURE H2O
Set the boiler temperature between 65 - 80°C .

PUMP OPERATION
The pump activates water circulation when the in the generator the t° of the water reaches 60°C. As the pump always functions above 60°, an always open heating area is recommended to make product functioning increasingly uniform, preventing overheating blocks. Normally this area is defined “Safety zone”.

BURNING POT CLEANING
At pre-set intervals the generator performs the brazier cleaning, switching the machine off.
When the cleaning phase is finished, the generator will re-start automatically and continue its work back to the power level selected.

MODULATION and H-OFF
As the water temperature approaches the set point, the boiler starts to modulate automatically bringing itself to the minimum power.
If the temperature increases beyond the set point, it will automatically switch off indicating **H-OFF** and will automatically go back on when the temperature drops below the set point.

SWITCH-OFF
Press key 1 for three seconds.
When the operation has been performed, the appliance automatically enters the switch- off phase, blocking the supply of pellets.
The flue gas exhaust motor will remain on until the generator temperature has dropped below the factory parameters.

RE-IGNITION
The genertor can be re-ignited both automatically or manually, when the cooling cycle conditions and the preset timer have been satisfied.

ADDITIONAL ROOM THERMOSTAT

PLEASE NOTE : Installation must be performed by an authorised technician

Is it possible to thermostat a room adjacent to the room where it was placed the generator just connecting a room thermostat according to the procedure described in the next step (it is advisable to position the optional mechanical thermostat at a height of 1.50 m from the floor) . The generator functioning with the external thermostat connected to the STBY terminal can be different on the basis of the activation or disabling of the STBY function.
The STBY clamp leaves the factory jumpered, therefore it is always with closed contact (on request).

ADDITIONAL ROOM THERMOSTAT FUNCTIONING WITH STBY ACTIVE (STBY ON)

When the contact or the external thermostat is satisfied (open contact / temperature reached), the generator will switch off. As soon as the contact or external thermostat switches to the "not satisfied" status (closed contact/temperature to be reached) it will re-ignite.

PLEASE NOTE: the generator operation depends on the temperature of the water inside the thermal-product and relevant factory setting. If the generator is in H OFF (water temperature reached), any additional contact or thermostat request will be ignored.

OPERATION OF THE AMBIENT ADDITIONAL THERMOSTAT WITH STBY DISABLED [STBY OFF]

When the contact or external thermostat is satisfied (open contact / temperature reached), the generator will go to minimum. As soon as the contact or external thermostat switches to the "not satisfied" status (closed contact / temperature to be reached) the generator will start to work again at the pre-set power.

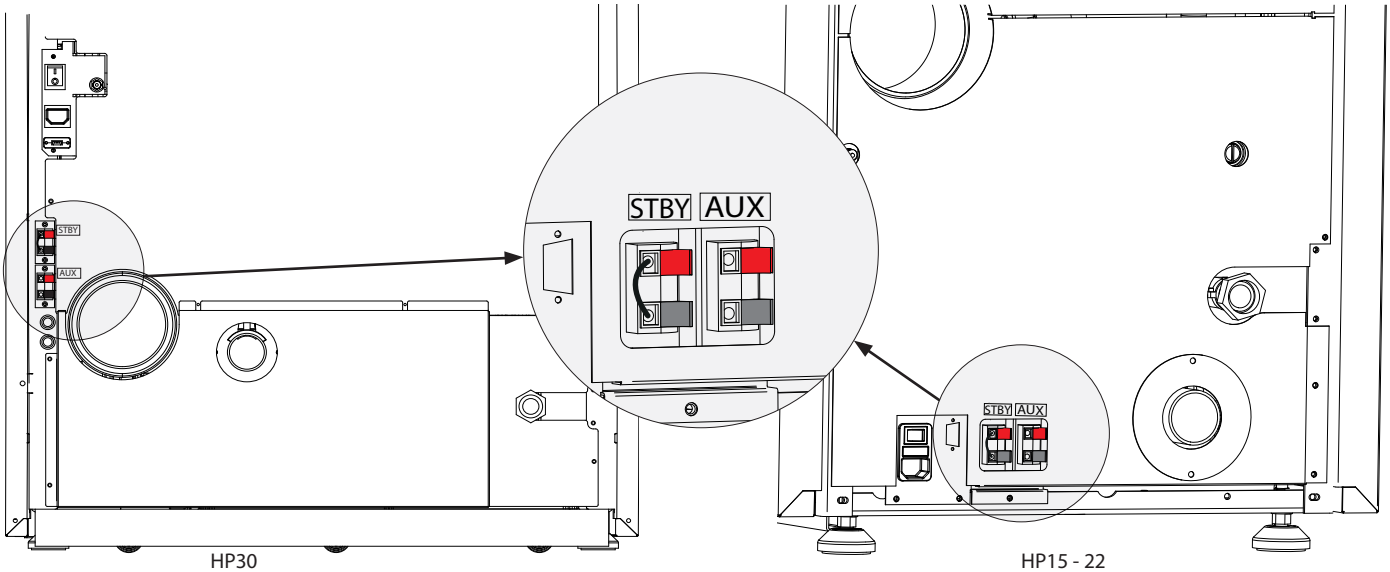
PLEASE NOTE: the generator operation depends on the temperature of the water inside the general and relevant factory setting. If the generator is in H OFF (water temperature reached), any additional contact or additional thermostat request will be ignored.

ADDITIONAL ROOM THERMOSTAT INSTALLATION

- Switch the appliance off using the master switch positioned on the rear of the generator.
- Remove the plug from the socket.
- Refer to the electrical diagram to connect the two thermostat cables onto the relative clamps positioned on the rear of the machine, one is red and the other one is black (STBY clamp).

AUX

Connection reserved for the productor's conveyed waves accessories.
Contact the dealer for further details.



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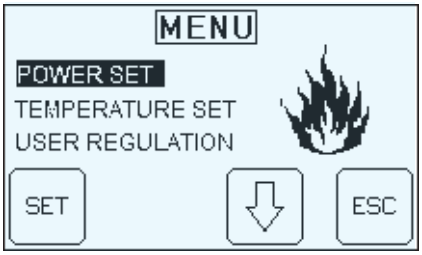
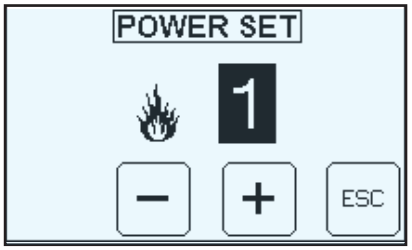
SET POWER

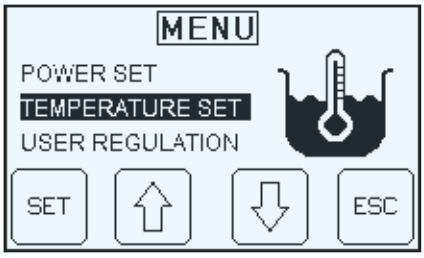
The following menu allows to set the power. Minimum power 1, maximum power 5.

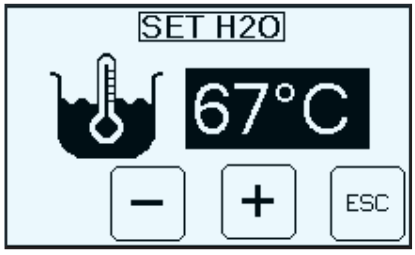




SET TEMPERATURE

The following menu allows the boiler temperature to be set. Possible setting are: 65 - 80°C.

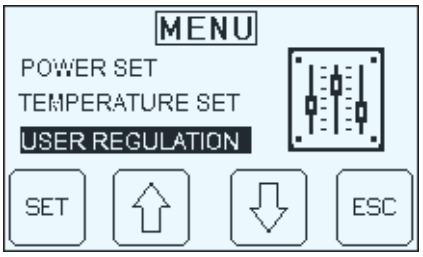




USER REGULATION

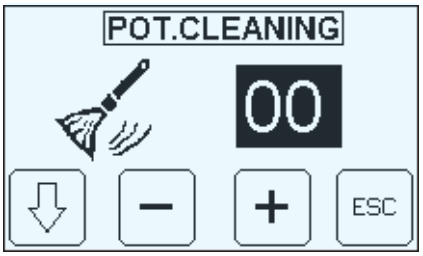
The USER REGULATION allows you to:

- Adjust the frequency of the BURNING POT CLEANING
- Enable / disable the STAND BY
- Enable / disable the CHRONO
- Adjust the PELLET in percentage.



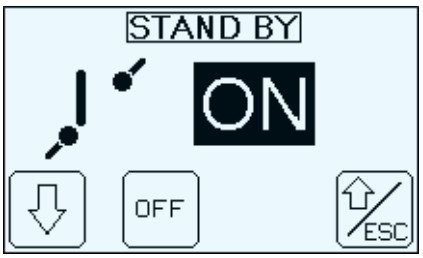
• BURN POT CLEANING

The menu allows to increase the frequency of the automatic cleaning of the brazier. (Range 0-50)



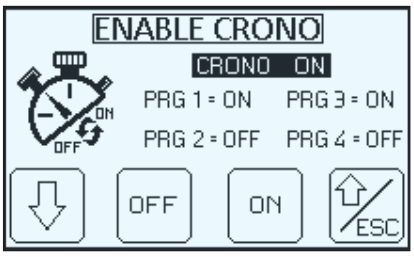
• STAND BY

The Stby function is used if immediate generator switch-off or modulation via an additional thermostat.



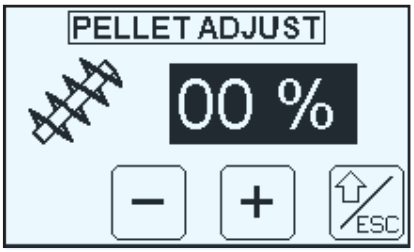
- **ENABLE CHRONO**

It allows to enable/disable the chrono and the various time slots of the boiler.



- **PELLET REGULATION**

The following menu allows to adjust the percentage of pellet feed.
If the generator has operating problems due to the quantity of pellets, you can adjust the pellet load directly from the control panel.
Problems related to fuel quantity can be divided into 2 categories:



FUEL SHORTAGE:

- the generator never manages to develop an adequate flame, tending to remain very low even at high power.
- at minimum power the generator tends to almost switch-off taking the generator into "**NO PELLETS**" alarm.
- when the generator displays the alarm for "**NO PELLETS**" there may be non-burnt pellet inside he brazier.

EXCESS FUEL:

- the generator develops a very high flame even at low power.
- the panoramic glass tends to get very dirty, almost completely darkening it.
- the burn pot tends to become encrusted, blocking the holes for air intake due to the excessive pellet feed, as it is only burned partially.

The adjustment to be performed is in percentage. Therefore a modification of this parameter will lead to a proportional variation of all generatorfeeding speeds.
Feeding is from -30% to +20%.

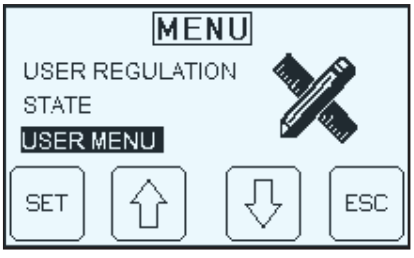
STATUS

References reserved to the technician

USER MENU

The USER MENU allows you to:

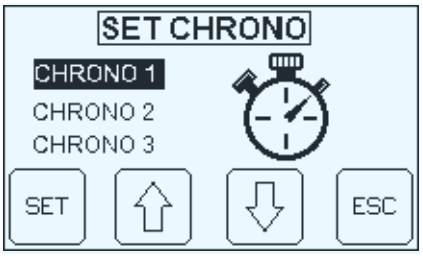
- Set date and time (See chapter before ignition)
- Set the programming CHRONO
- Set the LANGUAGE
- Set the DISPLAY
- Use the RESET

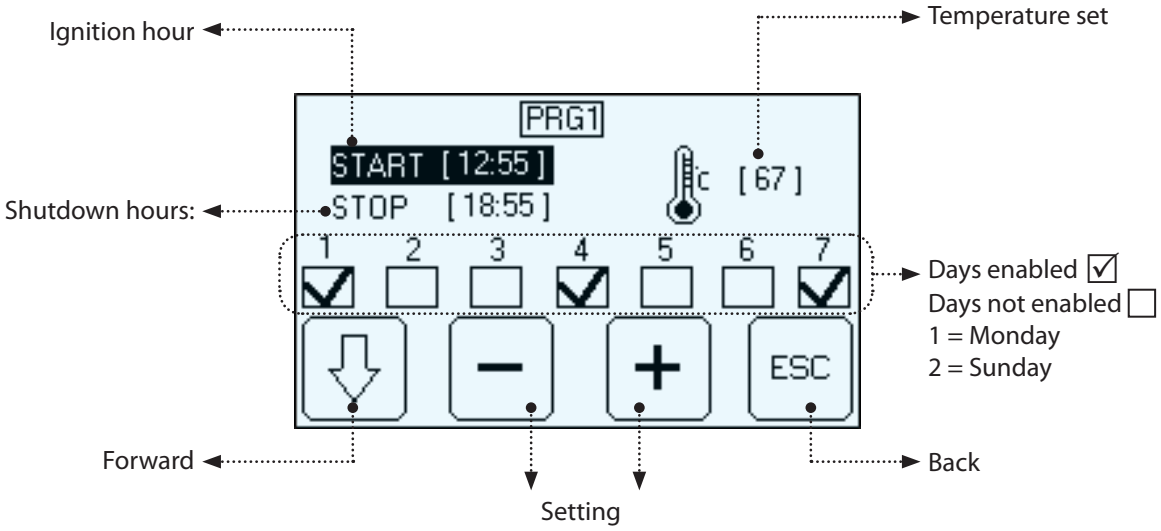


• CHRONO

The chrono allows to program 4 time spans within a day to use every day of the week.
The switch-on and switch-off time can be set in every time slot, along with the days of use of the programmed time slot and the desired water temperature (65 - 80°C).

TO ENABLE THE CHRNONO, FOLLOW THE INSTRUCTIONS DESCRIBED IN "ENABLE CHRONO" CHAPTER





RECOMMENDATIONS	EXAMPLE	
The ignition and switch-off times must be within the arc of one day, from 0 to 24 and not over several days: Before using the chrono function, set the current day and time. Therefore check that the points listed in the "Set clock" sub-chapter have been followed, so that the chrono function works. As well as programming it, activate it as well.	Switch-on time 07:00 Switch-off time 18:00	**CORRECT**
	Switch-on time 22:00 Switch-off time 05:00	**INCORRECT**

• LANGUAGE

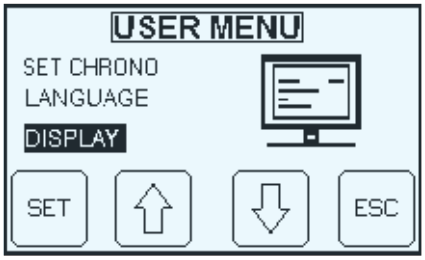
(See chapter before ignition)

• DISPLAY

- Buzzer
- Brightness
- Contrast

The Display menu allows you to:

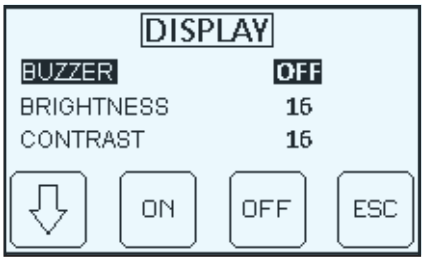
- Enable / disable the buzzer.
- Adjust the brightness of the display
- Adjust the contrast of the display



- **BUZZER**
  When set to "OFF" the acoustic signal is disabled.

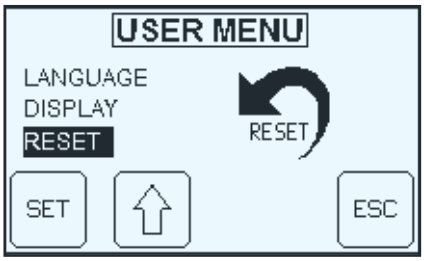
- **BRIGHTNESS**
  It allows you to adjust the backlight of the display.
  The possible settings range from OFF - 10 to 30.
  Activating OFF, the back light of the display will go off after a preset delay.
  The back light will go on as soon as a key is pressed or if an alarm should be triggered in the machine.

- **CONTRAST**
  Allows you to change the display contrast.
  (Range from 2-50)



- **RESET**

Allows to reset all values modifiable by the user to the default values.



OTHER FUNCTIONS

AIR DISCHARGE

This function allows to bleed any air in the thermal-product. (For 15 minutes the pump operates alternately, 30 seconds on and 30 seconds off)
To activate the function:

With the generator cold and in "OFF" state press and then "**AIR**" for 5 secs.

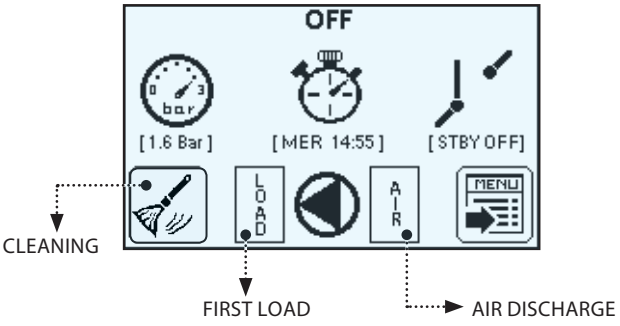
To stop the "air Bleeding function press the button

FIRST LOAD

This function allows to activate the pellet feeding motor reducer for continuous functioning.
To activate the function:

With the generator cold and in "OFF" state press and then "LOAD" for 5 secs.

To stop the "First load" press the key



COMBUSTION CHAMBER CLEANING

This feature allows you to open the bottom brazier, facilitating the cleaning of the combustion chamber.
To activate the function:
With the generator cold and in "OFF" state press and subsequently for 5 sec.
With the ash hook supplied as standard scrape the walls of the combustion chamber and transfer the residual ash in the brazier room ⇨ into the ash tray.

After cleaning, press and hold the button .

OPEN THE DOOR ONLY WHEN THE OPERATION IS PERFORMED! THE DISPLAY WILL INDICATE THE SUCCESSFUL OPENING!

CLEANING AND MAINTENANCE

For proper operation, the generator must undergo routine maintenance carried out by a qualified technician, at least once a year. Inspection and maintenance activities must be performed by specialized technicians who are familiar with the instructions in this manual.

ALWAYS FOLLOW THE INSTRUCTIONS IN MAXIMUM SAFETY CONDITIONS!

- Make sue the power cable is unplugged since the generator could be programmed to start.
- That the generator is cold in its entirety.
- The ashes are completely cold.
- Ensure an effective exchange of air in the room during the cleaning of the product.
- A poor cleaning is detrimental to the proper functioning and safety!

IF THE POWER SUPPLY CABLE IS DAMAGED, IT MUST BE REPLACED BY THE AFTER-SALES SERVICE OR BY A SIMILARLY QUALIFIED PERSON, SO AS TO AVOID ALL RISKS.

EVERY YEAR MAKE THE EXHAUST FUMES, SMOKE DUCTS AND "T"-FITTINGS, INCLUDING CAPS AND INSPECTION DOORS BE CLEANED - IF ANY CURVES AND ANY HORIZONTAL SECTIONS!

THE CLEANING OF THE GENERATOR FREQUENCY IS APPROXIMATE! THEY DEPEND ON THE QUALITY OF THE PELLETS USED AND THE FREQUENCY OF USE.
IT CAN HAPPEN THAT THESE OPERATIONS SHOULD BE PERFORMED MORE FREQUENTLY.

CLEANING AND MAINTENANCE BY THE USER

The cleaning process should be borne by the user of the generator and must be done by paying maximum attention after reading the information on the procedures described in this manual.

MAINTENANCE OF SURFACES AND COATING
The surface cleaning must take place when both the generator and the coating are completely cold. For the maintenance of surfaces and metal parts, simply use a damp cloth with water or mild soap and water.
Never use abrasive cleaning agents or aggressive solvents for cleaning! Failure to observe the instructions may damage the surface of the generator.

CLEANING THE CERAMIC GLASS
The cleaning of the ceramic glass is allowed only when the latter is completely cold. Clean the ceramic glass surface using a dry brush or in the case of a very dirty surface a specific detergent by sprinkling a small amount on a cloth and then passing it on the ceramic glass.
Do not spray cleaner or any other liquid directly on the glass or on the gaskets.

CLEANING THE TANK PELLETS
When the tank empties completely, unplug the power cord from the generator and remove residues (dust, chips, etc..) from the tank empty, before filling it.

ROUTINE MAINTENANCE

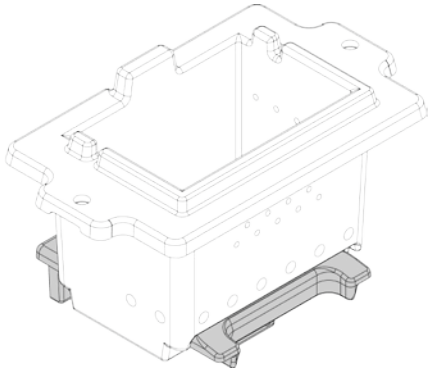
In order to guarantee proper functioning and safety of the device, the operations indicated below must be performed every season or more often when necessary.

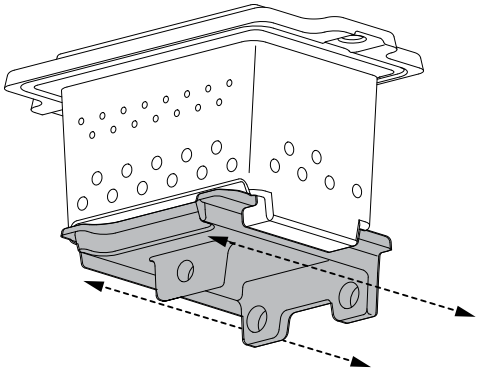
DOOR, ASH DRAWER AND BRAZIER GASKETS

The gaskets ensure the tightness of the generator and its resulting good operation.
It is necessary that they are checked periodically and if worn or damaged they must be replaced immediately.
These operations must be carried out by a qualified technician.

DAILY- BRAZIER:

Through a mechanical system, the burn pot is cleaned at set intervals automatically by the boiler. In the picture below one can see the burn pot with the opening underneath it.
It is in any case recommended to remove any ash residue using a vacuum cleaner, at least once every 2 days.

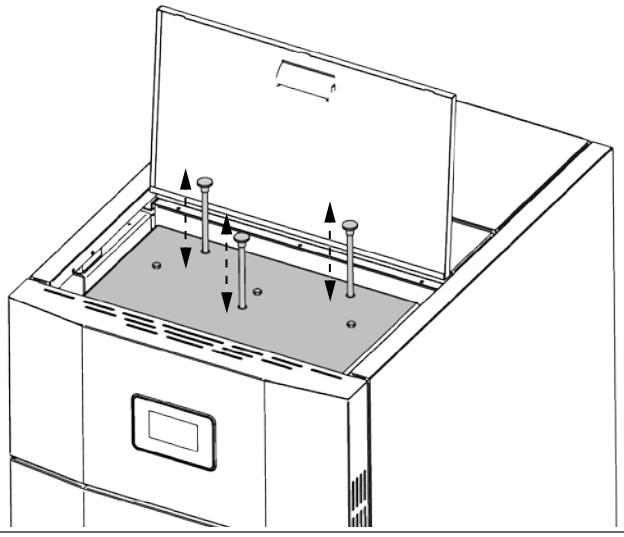




DAILY - SCRAPERS:

HP15/22: The heat exchangers must only be cleaned when the generator is cold! Cleaning the heat exchangers allows to ensure constant heat output over time. This type of maintenance must be performed at least once a day. To do this, just use the relevant scrapers positioned in the upper part of the generator, making the upward movements and vice versa several times.

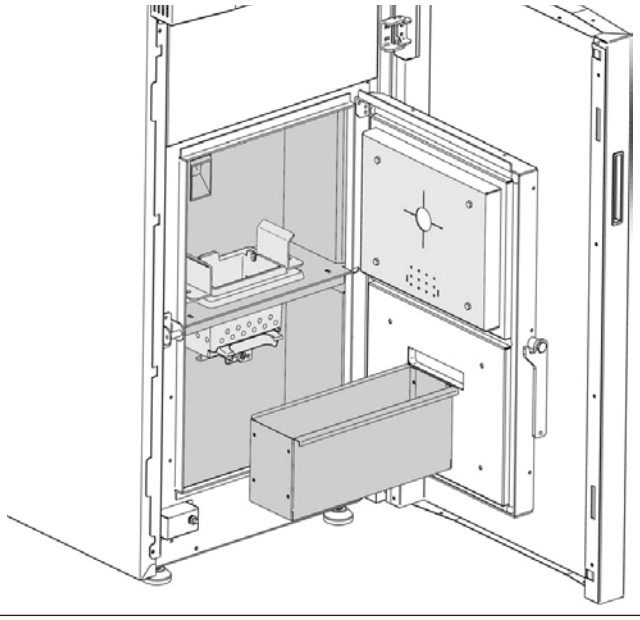
HP30: The cleaning of the heat exchangers is carried out automatically using a mechanical system that allows to guarantee over time constant heat output.



WEEKLY - COMBUSTION CHAMBER AND THE ASH TRAY:

It is recommended to remove the ash in the combustion chamber at least once a week using a suitable vacuum cleaner.
To facilitate cleaning, we recommend the activation of the "CLEAN COMBUSTION CHAMBER" See chapter ⇨ OTHER FUNCTIONS.

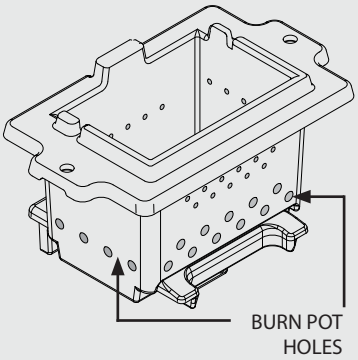
Empty the ash drawer every week or when required.



A CLEAN BRAZIER ENSURES SUCCESSFUL OPERATION!

KEEPING THE BRAZIER AND ITS HOLES ALWAYS THOROUGHLY CLEAN FROM ANY RESIDUE FROM THE COMBUSTION, GUARANTEES EXCELLENT COMBUSTION OF THE GENERATOR OVER TIME, TO AVOID ANY MALFUNCTIONS THAT MAY REQUIRE THE INTERVENTION OF THE TECHNICIAN.

IT IS POSSIBLE TO USE THE FUNCTION IN THE USER MENU "ADJUSTMENT SET - PELLET LOAD TO ADJUST COMBUSTION BASED ON THE DESCRIBED REQUIREMENTS.

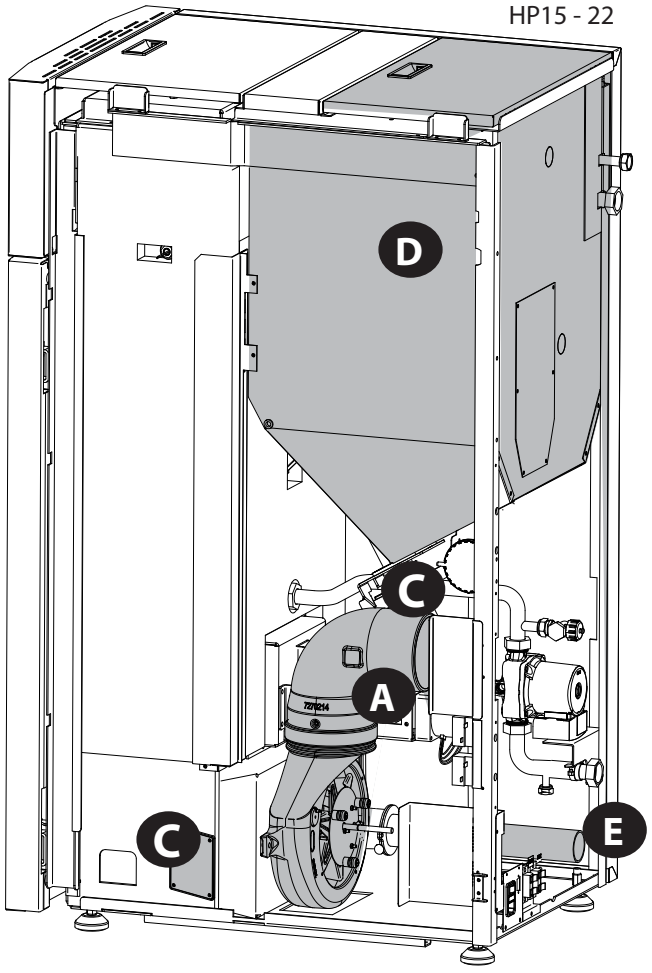


ROUTINE MAINTENANCE

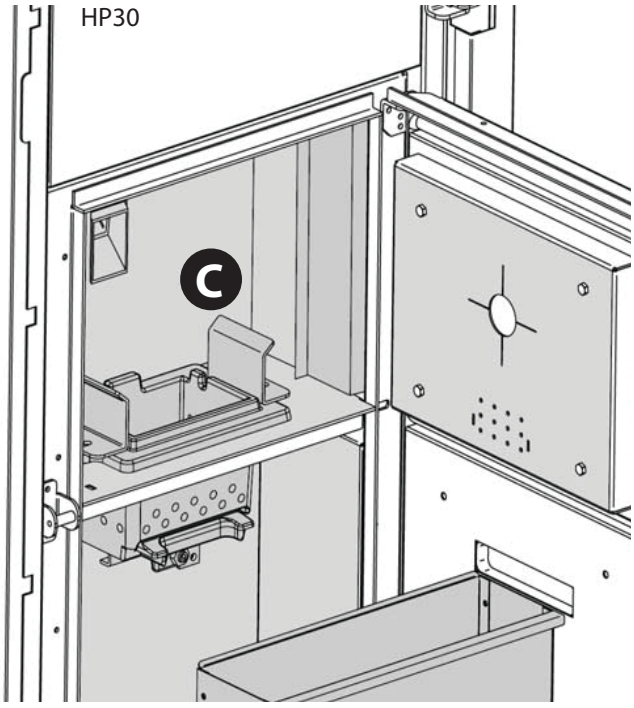
A	Fumes motor (disassembly and cleaning and fumes pipe and "T"), new silicone in required points	✓
B	Inspections of gaskets, ash drawer and door (replace them and apply silicone where required)	✓

C	Combustion chamber & heat exchanger (full cleaning) and ignition plug duct cleaning	✓
D	Tank (complete emptying and cleaning).	✓
E	Air intake pipe inspection and of flow sensor cleaning	✓

HP15 - 22



HP30



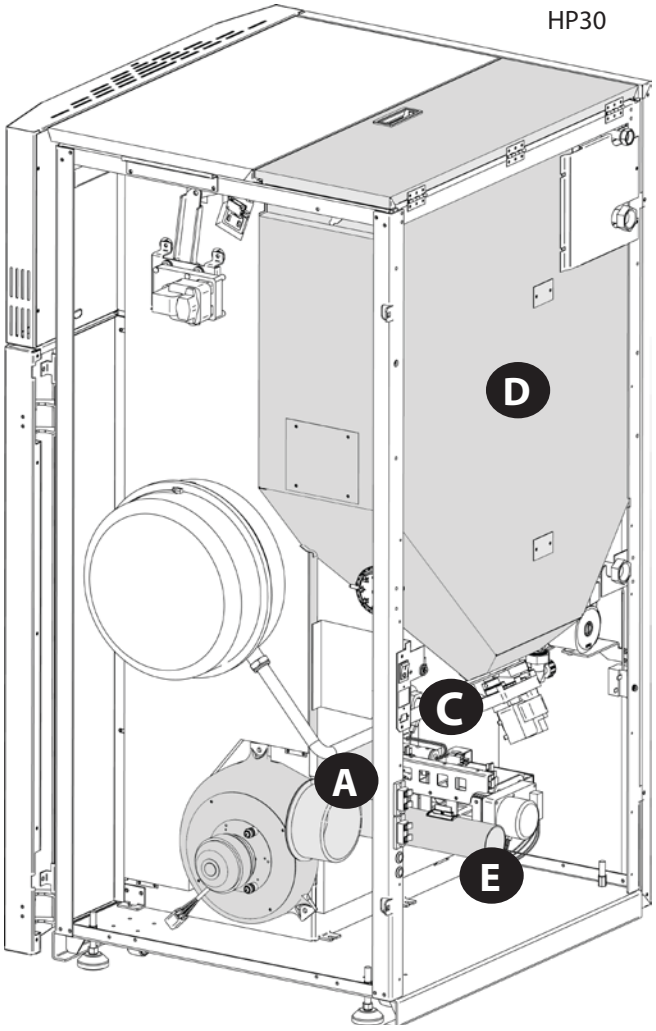
THE IMAGES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY

ROUTINE MAINTENANCE

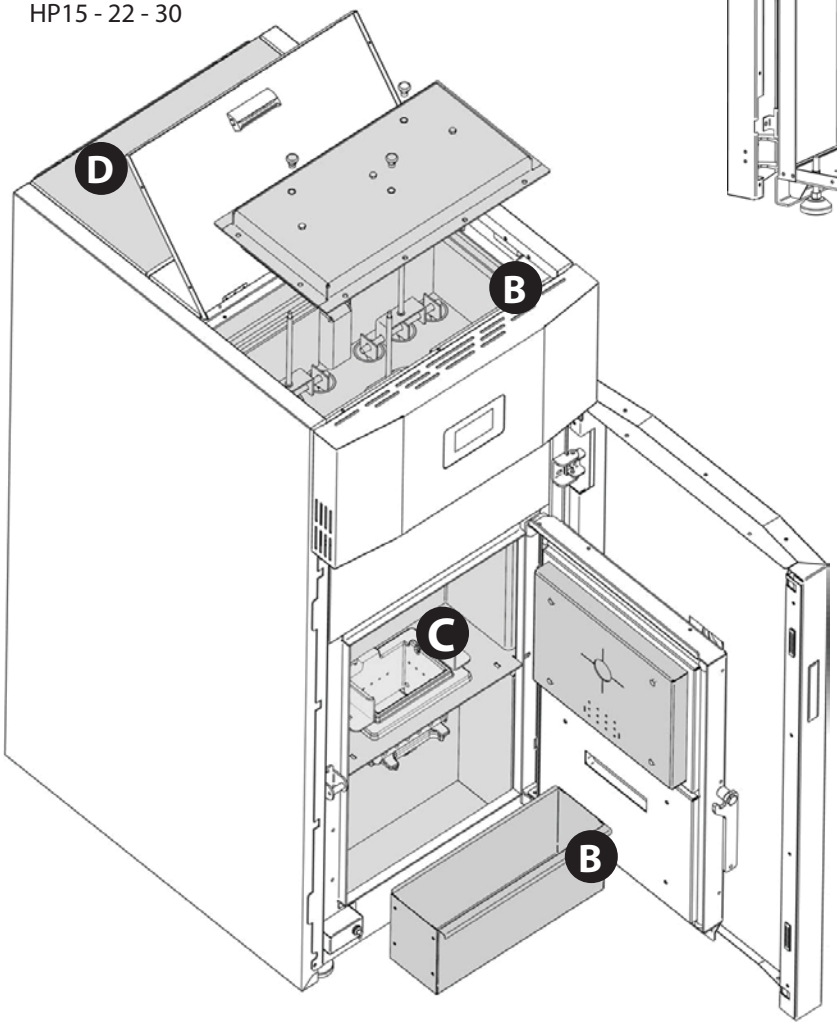
A	Fumes motor (disassembly and cleaning and fumes pipe and "T"), new silicone in required points	✓
B	Inspections of gaskets, ash drawer and door (replace them and apply silicone where required)	✓

C	Combustion chamber & heat exchanger (full cleaning) and ignition plug duct cleaning	✓
D	Tank (complete emptying and cleaning).	✓
E	Air intake pipe inspection and of flow sensor cleaning	✓

HP30



HP15 - 22 - 30



THE IMAGES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY

DISPLAYS	
DISPLAY	**REASON**
OFF	Generatore spento
START	The start-up phase is in progress
PELLET FEEDING	Continuous pellet feeding is in progress during the ignition phase
IGNITION	The ignition phase is in progress
START-UP	The start-up phase is in progress
WORK	The normal work phase is in progress
MODULATION	The stove is working at minimum
BURNING POT CLEANING	Automatic burn pot cleaning is in progress
BURNING POT CLEANING (VACUUM)	It's going to clean the brazier - insufficient cause depression.
FINAL CLEANING	The final cleaning is in progress
STAND BY	Stove off waiting for re-ignition due to an external thermostat The stove will only re-start when the external thermostat makes a request
WAITING COOLING	A new ignition is attempted when the generator has just been switched off when the generator switches off, it is necessary to wait for the complete shutdown of the engine smokes, then clean the burn pot. The stove can only be re-ignited when these operations have been performed.
HOFF	Stove off due to water temperature over set As soon as the water temperature drops below the pre-set parameters, the stove will switch back on
WAITING BLACK OUT	The stove is cooling after a power cut. Once cooling is completed it will re-start automatically
ANTI-FREEZE	The anti-freeze function is in progress as the H2O t° is below the factory set threshold the pump is active until the water reaches the pre-set factory parameter +2°C
ANTILOCK	The pump antilock function is in progress (only if the stove has been in an OFF state for at least 96 hours); the pump is activated for the time pre-set by the manufacturer, in order to prevent it from blocking
AUTO BLOW	The automatic blow is active
EXCHANGER BLOCKED	The cleaning of the heat exchanger is blocked

ALARMS		
DISPLAY	**EXPLANATION**	**RESOLUTION**
⚠	Indicates the presence of an alarm.	On: indicates the presence of an alarm Flashing: indicates the deactivation of the depression sensor. The alarm can be reset by pressing key ⏻ for 3 seconds only if the fumes motor has stopped and if 15 minutes have elapsed from when the alarm was displayed.

FUME MOTOR KO	Fumes motor fault	Contact after-sales centre
FUMES PROBE	Fumes probe failure.	Contact after-sales centre
HOT FUMES	High flue gas temperature	Check pellet feed (see "Pellet feed adjustment"). If the problem cannot be solved, contact an authorised technician.
EMPTY TANK	The door is not closed correctly. The ash drawer is not closed correctly. The combustion chamber is dirty. The flue exhaust pipe is blocked.	Check for the presence of pellets in the feed-box. Check hermetic door closure. Check hermetic closure of the ash drawer. Check cleanliness of the fumes pipe, of the sensor in the primary air channel and the combustion chamber. Contact after-sales centre
NO IGNITION	The pellet feed-box is empty. Pellet feed calibration inadequate.	Check for the presence of pellets in the feed-box. Adjust the pellet flow (see "Pellet feed adjustment"). Check the procedures described in the "Ignition" chapter.
NO IGNITION BLACK OUT	No current during the ignition phase.	Set the generator to OFF though the button ⏻ and repeat the procedures described in Chapter "Ignition".
NO PELLETS	The pellet feed-box is empty. No pellet feed. The motor reducer does not feed pellets.	Adjust the pellet flow (see "Pellet feed adjustment").
WARNING VACUUM	The door is not closed correctly. The ash drawer is not closed correctly. The combustion chamber is dirty. The flue exhaust pipe is blocked	Check hermetic door closure. Check hermetic closure of the ash drawer. Check cleanliness of the fumes pipe and the combustion chamber.
PRESSURE SENSOR DAMAGED	Flow sensor faulty. Sensor disconnected Pressure sensor faulty	Contact after-sales centre
OVERTEMPERATURE H2O	The water in the generator has exceeded 95°C. Possible air in the system. Lack of adequate circulation. Lack of or inadequate safety zone. Possible circulator anomaly.	Contact after-sales centre
TRAPDOOR BLOCK	The automatic door of the brazier is blocked.	Contact the after-sales centre
H2O MIN PRESSURE	The system pressure read by the pressure switch is too low. Presence of air in the system: Possible lack of water or leaks due to anomalies in some system component.	Contact the after-sales centre
WATER PROBE	H2O probe failure	Contact the after-sales centre
H2O MAX PRESSURE	The pressure of the water has exceeded the max threshold	Check that the expansion vessels are not damaged or under-dimensioned Check that the cold system is loaded at the correct pressure
COMMAND AUGER	Anomalous functioning of pellet feeding	Contact the technical support
AUGER BLOCKED	Anomalous functioning pellet engine	Contact the technical support
SANITARY TANK PROBE	Faulty boiler probe	Contact the after-sales centre
BUFFER PROBE	Faulty boiler probe	Contact the after-sales centre

Extraflame®

Riscaldamento a Pellet

EXTRAFLAME S.p.A. Via Dell'Artigianato, 12 36030 - MONTECCHIO PRECALCINO (VI) - ITALY
☏ +39.0445.865911 - 🖷 +39.0445.865912 - ✉ info@extraflame.it - 💻 www.lanordica-extraflame.com

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This manual cannot be considered as a contract for third parties.